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TOBACCO SITUATION

IN SOUTHERN AND SOUTHEASTERN ASIA

by

GEORGE W. VAN DYNE
Marketing Specialist

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FOREWORD

The highlight of the tobacco industry in Southern and Southeastern Asia since World War II has been a continuing shift in consumer preference from strong, dark tobacco to milder, lighter types. This has led to a large expansion in the production of United States flue-cured type in the region. The expansion itself, the increased import duties and other import restrictions which aided the expansion, and the shortage of dollar exchange have seriously hampered imports of United States leaf and tobacco products in certain of the countries concerned.

In an endeavor to foster and assist in the development and maintenance of markets for United States tobacco, and in order to appraise the trends in production and consumption from the viewpoint of their effect upon United States trade in leaf tobacco and products, George W. Van Dyne, Marketing Specialist, made a first-hand study of the tobacco situation in Southern and Southeastern Asia.

The countries visited included Pakistan, India, Ceylon, Indonesia, the Philippines, and Hong Kong. The study was based on interviews with farmers, buyers, storage warehousemen, importers, exporters, leaf processors, manufacturers, trade organizations, and government officials. Mr. Van Dyne's observations, supplemented by information compiled in Washington, D. C., from reports of foreign service officers, the Indian Central Tobacco Committee of Madras, and other sources are summarized in this report.

This study was conducted under the provisions of the Research and Marketing Act of 1946. The possibilities of broadening and maintaining foreign markets for other agricultural commodities are also being studied by this Office and findings are presented in other circulars and reports that may be obtained, free in the United States, from the Office of Foreign Agricultural Relations, United States Department of Agriculture, Washington 25, D. C.

Joseph A. Becker

Joseph A. Becker, Chief
International Commodities Branch

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Flue-cured tobacco seed on the stalk in the drying stage. Tobacco seed is very small - about 300,000 seeds weigh an ounce. A heaping spoonful of seed is sufficient to sow 25 square yards of seed bed and should furnish enough plants to set an acre in the field.

TOBACCO SITUATION IN SOUTHERN AND SOUTHEASTERN ASIA

For many decades countries in Southern and Southeastern Asia produced principally strong, dark air-cured and cigar types of tobacco. However, consumers and tobacco manufacturers in this region, which includes Pakistan, India, Ceylon, Indonesia, the Philippines, and Hong Kong, have long recognized the unexcelled flavor and aroma of mild tobaccos grown in the United States and have imported substantial quantities of them.

During the years just after World War I the demand for milder, brighter types of leaf tobacco, especially United States flue-cured, increased sharply at the expense of the stronger, darker varieties. Consumers who could afford to do so patterned their smoking habits after the English and smoked straight Virginia cigarettes or pipe mixtures which contained a high percentage of United States flue-cured tobacco. In an endeavor to achieve self-sufficiency as regards their tobacco requirements most of these countries imposed restrictions on imports of leaf tobacco and products. Furthermore all but Hong Kong, which grows no tobacco, began to produce United States flue-cured type leaf. The expansion in output was moderate at first but accelerated after the Second World War.

Total production of flue-cured type leaf in the five countries increased from an annual prewar (1935-39) average of about 36 million pounds (farm weight) to approximately 114 million pounds for the 1950-51 season while combined production of all types in these countries during this period decreased from about 1,404 million pounds to around 890 million pounds. Opinion is that production of the indigenous types during the next 10 years will increase slightly but that outturn of flue-cured types will probably double.

Consumption of machine-made cigarettes, about 50 percent of which are mild Virginia varieties, rose from a prewar annual average of about 23 billion pieces to approximately 46 billion in 1951. The cigarette industry in each of the six countries is highly mechanized and very efficiently operated. India leads in factory output, which increased from a prewar annual average of 7.5 billion pieces to about 24 billion in 1951. The industry in Indonesia is steadily recovering from the ravages of war, but is still badly handicapped by the chaotic labor situation and political upheavals. However, output during 1951 was reported at 9 billion pieces compared with a prewar average of about 11 billion. The bulk of the production of cigarettes, except in the Philippines, is the Virginia-type which is going ahead at the expense of all other tobacco products. Factory output of cigarettes in the Philippines for 1951 reached a record of 9.6 billion pieces, which was three times the prewar average. The preferred cigarette in the Philippines is the United States blended type but the native dark cigar variety is still popular, and there is also a significant demand for the straight Virginia type. Hong Kong's output of cigarettes in 1951 was about 2.5 billion pieces, which was double the prewar average. The trade believes that if the population in the area continues to increase at the same rate as during the past 10 years and consumer purchasing power keeps rising, consumption of domestic machine-made cigarettes will again double during the next decade.

For many years prior to World War II exports of leaf tobacco or products were not of great importance to the economy of any country in this area except Indonesia and the Philippines. As a result of the war and the disturbed conditions which followed, these two famous tobacco-producing countries lost most of their export trade. Since the war, India has become a more important exporter, particularly of flue-cured type tobacco. Pakistan and Ceylon are also rapidly becoming surplus producing areas and expect to have some surplus of flue-cured leaf.

The pattern of imports of United States leaf into the area has changed sharply since the war, principally as a result of the switch in consumer preference and the successful development in production of United States type of leaf in most of these countries. Tables 1 and 2 reflect drastic changes, especially since 1948, in the imports of United States cigarettes and leaf tobacco into the Philippines. Imports of cigarettes into the Philippines declined sharply from 11.6 billion pieces in 1948 to 1.2 billion in 1951, while imports of leaf tobacco soared from only 211,000 pounds in 1948 to over 27 million pounds in 1950. In Indonesia the changes were also very significant. Imports of leaf increased from a prewar average of 2.2 million pounds to 12 million pounds in 1951, while imports of cigarettes rose from a prewar level of 15.8 million pieces to 52.9 million pieces. In India the decrease in the imports of leaf tobacco since 1947 is indicative of the country's successful production of flue-cured types. The decline in the importation of cigarettes reflects the successful operation of its cigarette factories, practically all of which, however, still manufacture some Virginia-type cigarettes containing blends of 100 percent United States flue-cured tobacco. Increases in the imports of unmanufactured tobacco in Pakistan result from the operations of its new cigarette factory which, like those in Hong Kong and Ceylon, produces mainly Virginia-type cigarettes.

Imports of unmanufactured leaf and tobacco products into the United States from these countries during the 3-year period 1949-51 were limited to cigar leaf tobacco from Sumatra and the Philippines. Imports of this type of tobacco show an upward trend, and for the 3 years averaged about 750,000 pounds from Sumatra and 500,000 pounds from the Philippines.

Table 1. - Unmanufactured tobacco: Exports from the United States, by specified countries, average 1935-39, annual 1947-51 (declared weights)

Country of destination	Average 1935-39	1947	1948	1949	1950	1951
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Pakistan	)			(331	1,006	1,376
India	) 2,923	11,383	10,083	(6,897	4,559	4,765
Ceylon	934	1,322	903	620	935	1,029
Indonesia	2,239	3,317	4,423	5,382	7,442	12,168
Philippines	1,366	24	211	1,110	27,072	9,466
Hong Kong	1,625	3,226	5,781	6,116	5,166	4,711
Total	9,087	19,272	21,401	20,456	46,180	33,515

Source: Bureau of Census.

Table 2. - Cigarettes: Exports from the United States, by specified countries, average 1935-39, annual 1947-51

Country of destination	Average 1935-39	1947	1948	1949	1950	1951
	1,000 pieces	1,000 pieces	1,000 pieces	1,000 pieces	1,000 pieces	1,000 pieces
Pakistan	)		(250	2,130	4,346	2,360
India	) 14,719	3,286	(2,700	2,390	1,485	3,070
Ceylon	101			476	860	500
Indonesia	15,844	689,545	80,266	116,350	32,360	52,888
Philippines	2,543,597	9,639,594	11,574,535	7,422,363	1,526,630	1,214,240
Hong Kong	22,159	1,443,775	737,716	983,022	1,132,752	1,199,096
Total	2,596,420	11,776,200	12,395,467	8,526,731	2,698,433	2,472,154

Source: Bureau of Census.

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PAKISTAN

Tobacco has been cultivated in Pakistan since the middle of the sixteenth century. Many types of the Nicotiana rustica and Nicotiana tabacum species are now extensively grown. Improved types of the former species are known locally by such names as Motihari, Gobi, and Peshawari, and those of the latter by Jati, Bulkhi, Desi, and flue-cured.

Production of leaf since 1947, when Pakistan became a self-governing Dominion, has declined somewhat and has averaged about 150 million pounds annually. According to official statistics published by the Pakistan Government, this is less than one-half of the prewar, (1935-39) average. Trade sources, however, report that the decline in output from prewar has not been so pronounced. It is believed that part of the reported drop shown in official statistics is the result of changes in methods of obtaining official data, which are now considered more accurate than in prewar years. Some decline in production of tobacco has occurred as a result of increased acreage planted to food crops, but it apparently has not been as great as that shown by the official statistics. Recent attempts to expand production of flue-cured type tobacco are proving successful, and it is believed that the declining trend in total output may soon be reversed.

Table 3. - Pakistan: Tobacco acreage, yield, and production, average 1935-39, annual 1947-50

(farm weights)

Year of harvest	Area planted	Average yield per acre	Production
	Acres	Pounds	Pounds
Average			
1935-39	355,000	913	324,053,000
Annual			
1947	187,069	951	177,840,320
1948	168,984	905	153,005,444
1949	167,792	899	150,890,881
1950	166,588	901	150,142,720

Source: Statistical Section, Department of Agriculture, Karachi, Pakistan.

The total land area of Pakistan is 337,524 square miles, or about the size of Texas and Oklahoma. The country consists of two large sectors, one in the northwestern and the other in the northeastern corner of the Indian subcontinent. Karachi is the capital of Pakistan and the chief port of West Pakistan. It is separated from Dacca, the capital of East Bengal, the eastern part of Pakistan, by about 1,000 miles of the Indian subcontinent from which Pakistan and the Republic of India were created in August 1947.

About 69 percent of Pakistan's leaf tobacco is grown in the Province of East Bengal, approximately 16 percent in the Punjab, and 11 percent in the North-West Frontier Province. The bulk of the remainder is grown in Sind Province, and some is produced in the States of Bahawalpur and Kalat.

The Rangpur district in East Bengal is of outstanding importance because it produces the bulk of Pakistan's Motihari leaf which is utilized principally in making hookah tobacco, bidis, and chewing tobacco.1/ In addition, Rangpur's production of Jati leaf for the manufacture of cheroots is of much value to the economy of the region. Mymensingh and Dacca are other important tobacco-growing districts in East Bengal. In the Punjab native types of tobacco include Desi, Gobi, and Dukhi. The Dukhi produced in the Campbellpur--Hazro district is especially noted as a snuff tobacco. Other important tobacco-producing districts in the Punjab are Attock, Akora-Khattak, and Montgomery. Each of these districts produces both native and flue-cured types of tobacco. The North-West Frontier Province includes the tobacco districts of Mardan and Peshawar where superior quality hookah and bidi tobaccos are grown. Leaf grown in the State of Kalat is noted for its fine quality as a chewing tobacco.

It is estimated that about 67.1 percent of Pakistan's leaf is used in making hookah tobacco for domestic use; 15.8 percent in cigarettes, cigars, and cheroots; 8.3 percent in snuff; 5.2 percent in bidis; and 3.6 percent in chewing tobacco. Pakistan's export trade in unmanufactured and manufactured tobacco has become insignificant during the past few years because of import restrictions and increased duty in its most important markets.

Imports of manufactured products, principally cigarettes and cut tobacco for making bidis, have decreased in recent years because of trade restrictions, the migration of a great number of Hindu consumers, and the establishment and successful operation of a cigarette factory near Karachi. Furthermore, frequent increases in duty have led to high prices for imported cigarettes with the result that consumers have switched to domestically manufactured brands.

1/ Hookah tobacco is a product prepared from tobacco leaves and stalks mixed with molasses and other ingredients. It is smoked in a "hookah," a specially designed water pipe. The bidi is an indigenous form of cigarette made by wrapping granulated tobacco leaves mixed with scrap, stems, stalks, and other matter in the leaf of a forest tree of the Indian ebony species (genus Diospyros). To prevent the filler from falling out, one end is tucked in and string is tied around the other.

At Maurypur, 6 miles from Karachi, Pakistan's only important mechanized cigarette factory has been in successful operation since March 1950. The output of cigarettes has steadily increased and is now reported to be at the rate of 2,800 million per year which is still substantially below the country's current requirements. The company manufactures a wide range of well-made brands, including attractively packed flue-cured-type cigarettes in cartons of 10's and round tins of 50's. These cigarettes are made of blends containing varying percentages of United States flue-cured tobacco mixed with Indian and/or domestic flue-cured. Prices to the consumer for domestic cigarettes range from 2 annas (US$0.037) to 9 annas and 3 pice (US$0.182) per 10 cigarettes. Imported cigarettes sell for 3 rupees and 6 annas (US$1.01) to 5 rupees (US$1.50) per tin of 50's.

A shift in consumer preference from cigars, cheroots, and other products made from dark, strong tobacco to brighter, milder varieties is becoming more pronounced. Natives who can afford to do so pattern their smoking habits after the English. The preferred cigarettes are therefore the straight flue-cured types.

Manufacturers are endeavoring to cater to and further stimulate this trend. The production of tobacco products is still a cottage industry in East Bengal, but the construction of a modern cigarette factory at Chittagong, the port for this very important sector of the country, is under consideration. About 50 percent of Pakistan's population of 75 million people are concentrated in this sector which comprises only 15 percent of the country's total area. Furthermore, this is one of the finest agricultural regions and potentially one of the most important tobacco producing areas in Southeast Asia. During the few years of the country's existence it has produced about two-thirds of the total tobacco crop. Attempts to grow flue-cured tobacco on a small commercial scale in the Rangpur district in the north of this sector have been successful. If the Chittagong factory project materializes, production in the district will undoubtedly be expanded as the climate is satisfactory and there is sufficient suitable land to produce several million pounds.

Flue-cured tobacco also has been successfully produced in West Pakistan, particularly in the North-West Frontier Province and in the Punjab, where it is grown under irrigation near the Kabul and Indus Rivers. One of the large companies which has several leaf tobacco development and buying depots in West Pakistan recently constructed a large buying, redrying, and storage center on the railway at Akora-Khattak in the heart of the sector. The equipment in the redrying plant includes a standard two-stick and apron machine. Commercial production of flue-cured tobacco in this sector during the 1948-49 season was 600,000 pounds from about 620 acres. A very substantial increase in production was obtained in 1949-50, when the crop yielded approximately 1,500,000 pounds from 1,525 acres. Even this record production was greatly exceeded during the 1950-51 season when a crop of about 4,500,000 pounds was harvested. It is believed that by 1953 sufficient flue-cured tobacco will be produced in the North-West Frontier Province and the Punjab to meet requirements of factories in West Pakistan; however, United States flue-cured leaf will continue to be used for blending purposes in medium and better class cigarettes. Pakistan's

flue-cured leaf is produced principally from Harrison Special, Bonanza, and Golden Dollar seed, cultivated and harvested by United States methods and cured in modern barns. The product is not comparable in general quality with United States flue-cured tobacco, but it has good color, is neutral, and burns well.

Although Indian and Pakistani flue-cured tobacco has been available during recent years, there has been a continuing demand by manufacturer and consumer for United States tobacco because of its outstanding merits and despite its high cost. Exports of this type from the United States to Pakistan increased from 331,000 pounds in 1949 to 1,006,000 pounds in 1950 and are expected to show further increases during the next few years.

The manufacture of cigarettes in Pakistan has also resulted in an increased use of Indian flue-cured tobacco, imports of which totaled 2,538,939 pounds in 1949 and 3,356,296 pounds in 1950. As domestic production of flue-cured leaf expands, however, it is believed that imports from India will decline. Imports of leaf tobacco from sources other than India and the United States are insignificant.

Pakistan's imports of tobacco products consist principally of cigarettes and cut tobacco. Total imports of cigarettes, mainly from India and the United Kingdom, decreased from 790,932,111 pieces in 1949 to 302,449,895 pieces in 1950. Imports of cut tobacco, practically all of which comes from India and is utilized in making bidis, declined sharply from 54,913,821 pounds in 1949 to 13,136,554 pounds in 1950. Imports of cigars also dropped heavily from 3,648,785 pieces to only 930,528 pieces in 1950. These decreases resulted principally from import restrictions, the change-over from imported to domestically manufactured cigarettes, and the loss of consumers by migration.

INDIA

The Republic of India (a new nation comprised of the portion of the Indian subcontinent outside of Pakistan and Kashmir) with a population of over 350 million and an area of over 1.1 million square miles is the world's third most important tobacco producing country, being surpassed only by the United States and China. It ranks fourth as a tobacco consuming country, and it is among the top 7 tobacco exporting countries. It also imports some tobacco, principally flue-cured leaf from the United States. This tobacco is used in the production of better cigarettes.

Highlights of the tobacco situation in India during the past two decades have been a rapid expansion in the production of flue-cured leaf, increased attention in grading and marketing most of the tobacco grown in the country, much larger exports, higher average imports, and greatly increased production and consumption of machine-made cigarettes. Advances are expected in all of the above phases except leaf imports, but probably not at the rate of the past few years. Leaf imports declined in 1949 and 1950 and are expected to continue downward as expansion in production and improvement in quality of the country's flue-cured leaf occurs.

Production and Marketing

The Republic of India includes over two-thirds of the tobacco producing area of the Indian Empire. Since the partitioning in 1947, production in India has averaged about 575 million pounds from approximately 825,000 acres. Published official data on the prewar acreage and production in what is now the Republic of India indicated about 762 million pounds from 917,000 acres. These prewar figures, however, are not directly comparable with the estimates of production since 1947. The indicated higher production in prewar years is believed to have resulted largely from methods of estimating the crop. For some types, the estimated production included all or part of the tobacco stalk. The discontinuance of this practice in some districts in postwar years and other refinements in the methods of estimating are believed to have resulted in more accurate figures since 1947.

Trade sources report that changes in acreage and production have probably not been significant and certainly not as great as is indicated by the official data. Sharp increases are reported in the production of flue-cured leaf and some other types which are used in factory production of tobacco products in the country and also exported. It is believed that production of many of the native types which do not go into factory production of products has decreased substantially, but that such decreases have been largely offset by increases in flue-cured and certain other types.

Table 4. - India: Estimated total average and production of tobacco, average 1937-39, annual 1947-51

Year 1/	Area planted	Production
	1,000 acres	1,000 pounds
Average		
1937-39	917	761,600
Annual		
1947	845	603,000
1948	784	542,300
1949	803	571,200
1950	860	591,360
1951	839	562,240

1/ Year ending July.

Source: Indian Central Tobacco Committee.

Tobacco is grown to a varying extent in all of the states in the Indian Republic. In recent years the States of Madras and Bombay have accounted for about two-thirds of the total area planted to tobacco. During the 1950-51 season about 38 percent of the total was planted in Madras and 29 percent in Bombay. The States of Bihar and West Bengal were tied for third place, with 5 to 6 percent each.

Most of the tobacco is grown in the dry fall and winter months. It is only in the relatively unimportant producing districts in certain northern areas, parts of the arid districts of the northwest, and at places of highest altitude on the central plateau that the crop is grown during summer months. In these districts seedbeds are started between the first of March and the middle of June and the crop is harvested during the late summer and fall months. Throughout most of the country and in all of the principal tobacco producing districts the bulk of the crop is planted immediately following the wet summer monsoon. Seedbeds are started during the latter part of the rainy season, which varies in different sections of the country from August to October. Transplanting is accomplished with the last rains, and the crop is grown during the following dry months.

The small quantities of leaf grown during the rainy season in districts where rainfall is heavy are planted so that the harvest period will fall after the wet monsoon. Such leaf tends to be rank, woody, and darker in color than leaf grown during the dry season or raised during summer months in areas of restricted rainfall.

An experimental field in India and typical leaf of Type R.D. 1 (Motibari), Nicotiana rustica species.

Pounding tobacco into a dust for use in making hookah tobacco in India.

Left. Watering and weeding young flue-cured type tobacco plants growing in typical seedbeds in the Rajahmundry district, Madras State.

Right. A fine stand of flue-cured type tobacco plants in northern Madras which have been allowed to mature seed for another crop.

Left. A typical flue-cured type tobacco sales court at Kovvur on the Godavari river in northern Madras. The tobacco has been inspected and sold, and the bales are being prepared for shipment to the processing plant.

Irrigation from ponds, wells, or canals is quite common in a number of districts. In many sections, however, the soil is a heavy clay loam with a high water table, and the moisture retained from the rainy season is sufficient to produce a fairly good tobacco crop without irrigation. It is believed that for the country as a whole about 70 percent of the tobacco is grown without irrigation. Irrigation is usually resorted to in growing heavy dark types; this practice is not generally followed in the production of lighter types, except in the extremely dry areas.

The use of commercial fertilizers is limited. Experiments conducted over a period of 5 years in connection with the production of flue-cured tobacco repeatedly showed that improvement in quality and yields resulted only from nitrogen and that this type of tobacco did not benefit in any way from phosphorus or potash. Farmyard manure, to the extent of about 5 tons per acre, has been used successfully by a limited number of growers of flue-cured tobacco, particularly in the Guntur districts. Manuring in general, however, is confined to limited applications of compost, the folding of sheep and goats on fields prior to their use for tobacco, and the plowing under of green manure crops. Substantial quantities of tobacco waste are also used as a fertilizer in some sections. In districts where there is a high percentage of saltpeter and other nitrogen and potash compounds in the water, fertilization is accomplished along with irrigation.

Methods of harvesting and curing tobacco differ widely. Often tobacco from the same field is handled by different methods. Harvesting is accomplished principally by stalk-cutting, but the country's flue-cured tobacco is primed a leaf at a time as in the United States. Another method of harvesting is splitting. The stalk is cut in pieces bearing two or more leaves. The whole plant is harvested at one time and the sections of stalk attached to the leaves are cured for use with the leaves.

The principal methods of curing include flue-curing, air-curing, rack-curing (a form of sun-curing), ground-curing (also a form of sun-curing), and pit-curing.

The flue-curing process is similar to practices followed in the United States. Coal and wood are the principal fuels used for curing, but a few barns are equipped with oil heating apparatus.

Air-curing is practiced in many of the tobacco districts, but air-curing barns such as used in the United States are rarely seen. Most of the curing by this process is accomplished by hanging tobacco in farm sheds or in shaded places under the eaves of farm buildings and houses. Its use is not restricted to any particular type.

There are several methods of rack-curing. The most common method, and the one which is widely practiced in the southern part of the country, is to string the leaves close together and hang them in the field between poles supported by stakes. The strings of leaves are placed about 6 to 10 inches apart. Thus, with the exception of outside leaves, only a small portion of

the tobacco is exposed to direct sunlight. In a method of rack-curing practiced to some extent in the northwestern part of the country the leaves or the whole plant are spread on frames supported by poles about 3 to 6 feet above ground. The leaves or plants are turned so that all parts are exposed directly to the sun. In the northeastern districts a portion of the tobacco is cured on movable racks that are carried inside at night to prevent damage from dew. In the southwestern districts some of the native types are cured by a combination of air- and rack-curing. Temporary, low, closed sheds made of matting supported by poles are built in the fields. Tobacco is harvested and piled in the sheds where it remains for 2 days. The leaves are then strung and hung in the sheds. About 7 days after hanging, the roofs of the sheds are removed, and the leaves are allowed to hang exposed to the sun until completely dry.

Ground-curing is most common in northern districts and in Bombay State. The tobacco is either stalk-cut or split. The plants, or sections of them, are laid on the ground either separately or together in rows with their butts resting on the ground and the stalks and leaves overlapping the preceding row of plants. In either case they are usually turned to alternate the side of the leaf exposed to the sun.

Pit-curing is a fermentation process accomplished by the use of pits or silos above ground. Most pit-cured tobacco is at least wilted before it is placed in pits or silos and, with the exception of types that have a heavy woody leaf with relatively low moisture content, the tobacco is first partly cured by ground-curing. The leaves, or whole plants, are packed in pits or silos and covered with straw and earth. In some cases they are allowed to remain in this condition undisturbed until fermentation has completely stopped. In most cases, however, they are removed from the pits or silos after a few days and further fermentation is accomplished by alternating ricking and airing.

Variations in soils and climate in the numerous tobacco districts of the Republic of India, together with different methods of cultivating, harvesting, and curing of tobacco result in a wide range in types of leaf. Governmental authorities in the country have made no attempt at a systematic commercial classification of the leaf. Except for flue-cured and some of the other imported types, the different kinds of tobacco generally carry the name of the district in which they are produced. Very often tobacco of quite similar characteristics is known in different localities by different names, and in a number of cases tobacco of the same name has quite different characteristics.

Two main species of the leaf, Nicotiana tabacum and Nicotiana rustica, are grown. In the 1950-51 season, about three-fourths of the production was of the Nicotiana tabacum species and one-fourth Nicotiana rustica. The Nicotiana rustica tobacco is generally a heavier bodied leaf than the Nicotiana tabacum, but leaf of both species varies in color from very light or bright leaf to very dark, black tobacco. (See table 5.)

Table 5. - India: Tobacco production, by species and color of leaf, 1950-51

Color class	Nicotiana tabacum	Nicotiana rustica	Total
	Percent	Percent	Percent
Bright (flue-cured)	18.5	0	18.5
Light (rack-cured and ground-cured)	5.3	0.2	5.5
Medium light (rack-cured, ground-cured, and air-cured)	8.2	0.8	9.0
Dark (rack-cured, ground-cured, air-cured, and pit-cured)	44.0	23.0	67.0
Total	76.0	24.0	100.0

Source: Compiled from official source.

The commercial production of flue-cured tobacco in what is now the Republic of India was begun in 1927-28 when about 36,000 pounds were grown on approximately 80 acres. Production expanded rapidly from the start, and in 1950-51 totaled about 104.5 million pounds from 217,000 acres. The production is concentrated largely in the eastern parts of Madras State in a district now known as Circars, which indludes the towns of Guntur, Nellore, Kistna, Kovvur, Rajahmundry, and Vizagapatam. Production in this district accounted for 103.0 million pounds of the 1950-51 total. Other districts having a total production of about 1.5 million pounds in 1950-51 include the Mysore district of Mysore State, the Nakur and Gangho districts in the State of Uttar Pradesh, and the Nipani and Vijapur districts of Bombay State.

The crop in Circars district is grown during the dry, winter season on unirrigated heavy black soils. This is possible because of the high water table which follows the monsoon season. Methods of cultivating and harvesting the crop are much the same as in the United States. In 1950 there were about 17,000 flue-cured barns in the Circars district. Approximately 60 percent of the barns were single furnace type about 16' x 16' x 20' in dimension. The barns are built mainly of brick and/or rock with corrugated sheet-iron roofs, and they cost about $840 each. The remaining barns are double furnace type, which are larger and more expensive. The tobacco is carefully handled following harvesting and curing, and the majority of it is stripped prior to redrying.

In the town of Guntur alone there were 7 two-stick and apron tobacco redrying machines in operation in January 1951, two more were under construction, and an additional plant was being planned. At the nearby town of Chirala a four-machine redrying plant was in operation and a two-machine

plant was in operation at Anaparti. After redrying, the better grades of tobacco that are not exported immediately are stored in temperature- and humidity-controlled warehouses.

About one fourth of the flue-cured leaf from Circars and other districts of the Republic of India is light lemon to bright orange in color, but most of the remainder is dark brown or greenish in color. Most of the leaf has good combustion, but is lacking in oils and gum. The better grades are neutral in flavor, which together with other generally good qualities, makes it suitable for blending purposes in the manufacture of cigarettes. Cigarettes made exclusively from even the better grades of leaf are somewhat flat in taste, and a high percentage of United States flue-cured is used in the better quality flue-cured type cigarettes produced in the country.

Table 6. - India: Flue-cured tobacco area and production, 1951 with comparisons

Period 1/	Area	Production
	Thousand acres	Million pounds
Average		
1931-35	19	13.5
1936-40	71	31.5
1941-45	110	52.0
Annual		
1946	112	58.6
1947	129	60.0
1948	134	75.2
1949	144	79.2
1950	154	95.4
1951	217	104.5

1/ Year ending July.

Source: Trade sources.

Plans are being made for increased production of flue-cured tobacco in India. Prices for the leaf have been high in relation to prices for other commodities grown in the flue-cured tobacco districts of India, and demand for the leaf both for domestic use and export has been strong. Well-informed persons of the tobacco industry in India believe that the country's production of flue-cured leaf could be doubled within a 4-year period if present conditions continue. If plans are carried out it will mean more competition for United States leaf in Western Europe and other foreign markets. Prices for Indian flue-cured strips in the United Kingdom market since currency

devaluation have averaged around 40 cents per pound as compared with over 60 cents per pound for unstemmed United States leaf.

The only other United States type of tobacco cultivated in India is Burley. Commercial production of this type was started during the 1929-30 season when approximately 950,000 pounds were harvested. Before World War II, crops of Burley rarely exceeded 1 million pounds. Peak production was attained during the 1948-49 season when about 3.1 million pounds were harvested. Output of Burley fell to about 660,000 pounds in 1949-50 as a result of drought and plant disease but, largely as a result of more favorable growing conditions, it rose to 1.5 million pounds during the 1950-51 season. The tobacco is grown principally for export to the United Kingdom where it is used in the manufacture of pipe mixtures, but recently small quantities have been used in the domestic manufacture of cigarettes. The Indian Burley leaf is inferior to the United States product. It is thin, papery in texture, and lacks aroma. Since most of it is produced for a particular market in the United Kingdom it is anticipated that production will not expand substantially.

The light, medium light, and dark native tobaccos grown in the Republic of India include a wide variety of types, both of the Nicotiana tabacum and Nicotiana rustica species. Some of the light types, grown principally in the Bombay area, are yellow to orange in color but are generally of low quality. The medium-light tobaccos produced principally in the States of Madras and some of the central and northern states include much of the Natu or native tobaccos exported to the United Kingdom and other European markets. This tobacco is usually medium light brown in color but is also of generally poor quality. Dark types of leaf are grown throughout the country, but the principal districts producing dark types, particularly of the Nicotiana tabacum species, are in southern India. The types range from heavy, strong Nicotiana rustica types to mild Nicotiana tabacum types somewhat similar to certain United States cigar types. The prices at which most of the native tobaccos are sold are lower than those for flue-cured leaf. Leaf from the 1950-51 crop bought by commercial concerns ranged by types from around US$0.20 to as high as US$0.40 for certain select qualities.

There are no auction markets for tobacco similar to those existing in the United States, but attempts are being made to establish one at Guntur. Leaf used in native products is sold to small dealers or village processors. Most of the tobacco which is exported or used in the domestic production of factory products is sold on larger markets. These markets are similar to those in the United States except that each buying company still has its own marketing floors and there is no competition in bidding. If a grower is dissatisfied with prices offered by a particular buyer he can move his leaf to another sales floor.

The first attempt to standardize grades of the more commercial types of tobacco was made in 1937. The Agricultural Tobacco Grading and Marketing Act of 1937 set up grading specifications for flue-cured leaf for the purpose of promoting confidence of overseas buyers, and in 1945 the Government of India inaugurated a compulsory grading system for flue-cured leaf, Burley, and two of the principal native types.

In January 1951, 273 officials were authorized to grade, mark, and certify tobacco at 58 marketing centers, and the regulations provided that all tobaccos destined for export carry a government standard grade or agmark. As a result of the operation of this program, the general quality of leaf for export has improved and foreign buyers have had less risk in purchases.

Another outstanding development which has improved the quality and standards of the tobaccos has been the work of the Indian Central Tobacco Committee, which is financed by the government. The Committee began operating in 1945 with headquarters in Bombay, but in February 1949 was moved to Madras. The group is comprised of top-level officials of Central and State Governments, other informed people who have had wide international experience in tobacco, and representatives of the tobacco trade and allied industries. The Committee's main objectives are to assist in the improvement and development of the production and marketing of leaf tobacco and tobacco products. This organization has established a Central Tobacco Research Institute at Rajahmundry in Madras State for fundamental and applied research work on all types of tobacco, particularly flue-cured and other cigarette leaf. It has also established experimental stations for research on native tobaccos at Anand in Bombay State, Veda Sandur in Madras State, and Pusa in Bihar State.

In collaboration with the Government of Madras the Committee now operates a program for the development and distribution of improved strains of flue-cured type seed. Among its other accomplishments have been the construction of a redrying and processing plant, and improved tobacco storage facilities at Guntur in Madras State. Included in its activities are the collection of statistics and information on leaf tobacco and tobacco products from growers, the trade, and government departments. Much of this material is published in Madras by the Committee in its monthly bulletin and quarterly journal.

Exports and Imports

Authentic information on exports and imports of leaf tobacco and tobacco products for the Republic of India are not available, but all information indicates that exports, particularly of leaf tobacco, have increased sharply in recent years. Imports, largely leaf from the United States, in postwar years have averaged above the prewar level, but have declined sharply since 1948.

Official data on the export and import trade have been limited to the sea and air-borne trade. Prior to 1937, these data included exports from and into Burma, which, until then, was a part of the Indian Empire. Until the partitioning of India into Pakistan, Kashmir, and the Republic of India in 1947, it included sea and air movement for Kashmir and Pakistan. The bulk of the sea and air-borne trade, however, has always been represented by what is now the Republic of India, and some worthwhile trends can be noted from a comparison between the average trade in the years immediately following the separation of Burma from India and the trade in recent years of the Republic of India.

Table 7. - India: Sea and air-borne trade in leaf tobacco and tobacco products, average 1937-38 to 1941-42, annual 1948-49 to 1950-51 1/

Commodity and country	Average 1937-38 to 1941-42 2/	1948-49 3/	1949-50 3/	1950-51 3/
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
EXPORTS				
Leaf tobacco:				
United Kingdom	25,897	26,886	45,622	36,532
Sweden	4/	1,835	1,302	2,338
Denmark	4/	794	1,518	1,203
Netherlands	-	3,147	4,400	6,186
Belgium	4/	3,852	3,489	5,135
Burma	5/ 11,575	4/	4/	4/
Aden & dependencies	5,629	3,611	4,252	4,248
Hong Kong	788	799	4,050	720
Pakistan (Western)	-	2,924	5,411	6,317
All others	6/ 14,633	7,002	12,334	27,385
Total	58,522	50,850	82,378	90,064
Tobacco products:				
Cigarettes	1,665	1,842	1,312	804
Cigars	43	66	18	15
Other	3,760	3,068	2,937	4,313
Total	5,468	4,976	4,267	5,132
IMPORTS				
Leaf tobacco:				
United States	5,834	10,721	5,910	5,083
Burma	1,855	790	65	40
Others	355	4	2,408	893
Total	8,044	11,515	8,383	6,016
Tobacco products:				
Cigarettes	1,262	792	112	133
Cigars	226	2	11	2
Other	123	37	12	12
Total	1,611	831	135	147

1/ Year beginning April 1.
2/ Includes exports from areas now in Pakistan and Kashmir.
3/ Republic of India only.
4/ Not separately reported. Included in Others, if any.
5/ Largely from areas now in Pakistan.
6/ Includes 10,582,000 pounds to China.

Source: Commercial Intelligence and Statistics, Government of India.

India's trade in tobacco was not affected greatly by World War II. India continued to ship large quantities of leaf tobacco to the United Kingdom and many of its other normal markets. It also was able to receive imports from the United States, Burma, and some of its other principal suppliers.

The United Kingdom has always been the leading export market and by far the principal market for India's flue-cured tobacco. Exports to continental Europe in prewar years were limited, but have increased substantially in postwar years. Aden and other British dependencies have also been an important export market, and shipments to other Asiatic countries, principally China, Hong Kong, Ceylon, and Japan, have been substantial. In some postwar years, relatively large shipments of leaf were made to the U.S.S.R., and since the partitioning in 1947, there have been substantial shipments to Pakistan.

The proportion of total leaf exports represented by flue-cured has increased substantially in postwar years. It is estimated that in prewar years over 75 percent of total exports was whole leaf native tobacco, and approximately 25 percent flue-cured, largely strips. In postwar years, these percentages have been somewhat reversed and about 70 percent of the total is represented by flue-cured. This trend is expected to continue, and many observers believe that the export of flue-cured may exceed 100 million pounds within the next few years.

Leaf imports into the country have been principally flue-cured leaf from the United States for use in the better quality cigarettes produced in the country. Burma was formerly an important source for cigar types, but imports have dropped sharply. The decline in leaf imports from the United States since 1948 is expected to continue as the quality of Indian leaf is improved.

India's trade in tobacco products has always been relatively limited. The majority of exports have been native products other than cigarettes and cigars, and imports have been largely cigarettes. The export of cigarettes, which averaged about 1.5 million pounds in the years immediately preceding 1950, dropped to less than a million pounds for the 1950-51 fiscal year. In January 1951, however, it was reported that much larger quantities were being exported, particularly to Australia and New Zealand.

Manufacture and Consumption

During recent years, consumption of tobacco in India has averaged about 475 million pounds, which puts it in fourth place as a consuming country after the United States, China, and the U.S.S.R. The bulk of the consumption has been in native products, such as hookah, other pipe tobacco, bidis, chewing tobacco, and cigars and cheroots. Cigarette consumption, however, is increasing in importance; it rose from approximately 2.5 percent of total leaf consumed in prewar years to about 10 percent in 1950. Consumption of leaf in other products in 1950 was about as follows: hookah and other pipe tobacco, 48 percent; bidis, 20 percent; chewing tobacco, 12 percent; cheroots and cigars, 8 percent; and snuff, 2 percent.

Hookah tobacco, consumed principally in water pipes, is known as the national smoke in India. The processing of the tobacco is carried on principally in individual households or by small concerns, which supply a single community, but there are some native factories which sell over a wide area. The product in all cases is a combination of tobacco and other ingredients, principally fruit juices, molasses, and seasonings of various kinds. Usually, the sauces are prepared and allowed to ferment for some months prior to being mixed with the tobacco. The tobacco, which is predominantly of the Nicotiana rustica species, is prepared by being pounded into a fine powder. There are no standard brands or uniform packages of the product. Most of it moves directly from the processor to retail outlets. Some bazaar dealers even sell one pipeful at a time, and, if desired, will provide a hookah pipe for the consumer's convenience in completing his smoke.

The bidi represents a much larger percentage of total consumption than cigarettes. It is known as the poor man's cigarette, and has been used in India for generations. Bidis are made by rolling granulated tobacco in the leaf of a particular forest tree. To prevent the filler from falling out one end of the leaf is tucked in and the other is tied with thread. Manufacture of the product is carried on largely as a cottage industry, but a few native establishments produce relatively large quantities. The tobacco content of the product, which is generally of light types, varies from 25 to 75 percent of the total weight. Usually, bidis furnish a good smoke, are cool, mild, and aromatic. Popular brands are put up in packets of 25 and sell for less than US$0.03 per packet.

Prepared chewing tobacco, which is used throughout India, is also produced largely as a cottage industry. It is made by boiling pieces of the leaf and stem in lime water. The paste thus derived is dried and colored with saffron and other vegetable dyes. Substantial quantities of tobacco used for chewing, however, receive no preparation other than curing of the leaf. Sometimes a small portion of raw tobacco is chewed along with finely ground betel leaf.

Snuff is used in many sections of India, but consumption is small in relation to other tobacco products. It is prepared from stemmed leaf which is powdered in a mortar and pestle. The powder is carefully heated or toasted, and after it has cooled lime and ghee are added along with various other ingredients including perfumes and spices. The product is sometimes highly colored by various dyes.

Cigars and cheroots continue to represent a substantial part of tobacco consumption in India, but their use is declining sharply. Most of the cigars and cheroots are produced in southern India. There is no machine production, but a large portion of the output is in native establishments of substantial size.

Cigarettes have been used in what is now the Republic of India for more than 60 years. The first domestic production was entirely from dark strong indigenous tobacco. The bulk of the leaf was air-cured or rack-cured, but important quantities were ground-cured. Many consumers gradually showed a

preference for brighter, milder products, and straight flue-cured cigarettes made from United States leaf were introduced. For many years, however, consumption of flue-cured type cigarettes was largely limited to the wealthy class. Since the introduction and growing of flue-cured leaf in India, flue-cured type cigarettes have become more moderate in price, and consumption has spread to the low-income classes. At present, most of the straight flue-cured cigarettes which are produced locally contain a high percentage of Indian flue-cured and only a small portion of United States flue-cured leaf. Although they are still more expensive than the cigarettes manufactured largely from dark tobacco, the straight flue-cured cigarettes now represent over 30 percent of total cigarette consumption.

The country's cigarette manufacturing industry is an old-established, well-managed, free-trade enterprise. It is highly mechanized and modern. The first mechanized factory was built at Monghyr in Bihar State in 1907, the second at Bangalore in Mysore State in 1912, and the third at Saharanpur in Uttar Pradesh State in 1925. These three factories still produce most of the country's supply. There are now eight more modern factories, one each at Kidderpur and Agarpara, just outside Calcutta, and at Parel and Andheri, near Bombay City, and one large and three small ones at Hyderabad in Hyderabad State. In addition to these modern factories, there are quite a number of small, poorly equipped cigarette manufacturing concerns throughout the country.

The large, old-established companies manufacture a wide range of well-made brands including attractively packed straight flue-cured cigarettes in cartons of 10 and round tins of 50's. Other brands are blends containing varying percentages of Indian flue-cured and light native leaf. The cheapest cigarettes are made entirely of native leaf. Prices to the consumer for domestic cigarettes range from US$0.02 to US$0.14 per 10 cigarettes. Imported English-made Virginia cigarettes range in price from US$0.63 to US$0.95 per tin of 50.

CEYLON

All phases of the tobacco industry in Ceylon are expanding steadily. The total area planted to tobacco in 1951 was about 35 percent above prewar. Commercial plantings of about 50 acres of flue-cured tobacco were first made in 1947; by 1951 the area had been expanded to about 2,000 acres with a production of nearly 1 million pounds. The manufacture of machine-made cigarettes is now more than 3 times the prewar level, and the factory production of smoking tobacco is 7 times greater. Exports and imports have also shown substantial increase.

Production of leaf tobacco in Ceylon dates back to the beginning of the 17th century. Then and even now the principal types are strong, dark, air-cured varieties of the Nicotiana tabacum species grown on very small plots scattered throughout the island. Tobacco growing has developed into an important industry, and the native leaf is used principally in making cigars, cheroots, and chewing tobacco. Milder types of leaf have been introduced in more recent years, however, and cigarette production and consumption have increased slowly.

Ceylon's most important tobacco growing districts are in the Jaffna Peninsula in the north, the Dumbara Valley in the Central Province, and the Hiriyala Hatpattuwa in the North Western Province. The Jaffna tobacco has gained popularity chiefly because of its agreeable flavor for chewing, but also on account of its aroma and neutral qualities which make it suitable for cheroots. The Dumbara Valley tobacco has been successfully crossed with milder, lighter strains. Production of this variety is being expanded substantially to fill the increased demand for its use as a filler in mild cigars and for blending purposes in cigarettes. The Hiriyala Hatpattuwa tobacco is used principally for chewing and in making cigars.

The total area planted under tobacco annually during the prewar period (1934-38) averaged about 8,230 acres, and the yield was approximately 600 pounds per acre.2/ The pattern of domestic tobacco production and utilization did not change substantially until 1947. In that year commercial production of flue-cured Virginia-type tobacco began. The total area planted under all types reached 9,700 acres in 1950 and 11,200 acres in 1951, and total production increased from 5,841,000 pounds to 6,619,000 pounds, respectively. Increased production of flue-cured and of mild cigar tobacco was responsible for the increase over prewar output.

The leading tobacco companies, with the assistance of the Department of Agriculture, have made a success of the cultivation of flue-cured leaf. From 50 acres planted in 1947, acreage of this type was increased to 350 in 1948, 800 in 1949, 1,500 in 1950, and 2,000 in 1951. Production, which in 1949 was about 320,000 pounds, increased to 675,000 pounds in 1950 and 950,000 pounds in 1951. The yield per acre for the 1950 flue-cured crop was 450 pounds compared with 475 pounds for the 1951 crop. The leaf is very similar to Indian

2/ Source: Department of Agriculture, Peradeniya, Ceylon.

Growers bringing flue-cured type tobacco to sales depot near Kandy.

Growers' flue-cured type tobacco being weighed prior to sale at a typical sales depot at Teldeniya.

Native girls grading flue-cured type tobacco at Kurunegala.

Stringing or tying flue-cured type leaf on sticks preparatory to hanging the leaf in a curing barn.

Typical flue-curing barns at Kurunegala, an important curing center. Made of corrugated iron sheeting, these barns are 16'x16'x20' and hold about 70,000 leaves.

Located at Kurunegala, this is one of the principal buying, curing, and warehousing depots of the Ceylon Tobacco Company.

flue-cured tobacco. The bulk of it is lemon or light orange in color, has a neutral flavor, and burns well to a white ash. It is not comparable to United States flue-cured tobacco as it is lacking in taste, aroma, size, and body. However, it is a good blending tobacco and is being substituted for United States flue-cured leaf.

Two crops of flue-cured tobacco are produced in Ceylon each year. One is set out after the heavy autumn rains and the other during the light spring rains. Seedbeds are sown for the autumn crop in November and December, and the tobacco is transplanted in January and February for harvesting in March and April. Seedbeds are sown for the spring crop in May and June, and the tobacco is transplanted in July and August for harvesting in September and October. The most important production districts for the type are in the Central and North Western Provinces at Hanguranketa, Teldeniya, and Kurunegala, each near the town of Kandy, which is 72 miles from Colombo, the island's principal city and seaport. One of the tobacco manufacturing companies has 7 buying depots, 150 fire-curing barns, and 2 tobacco storage warehouses in these provinces. More barns are under construction and plans are to increase production substantially. It is believed that a crop of at least 2 million pounds of flue-cured tobacco could be produced within the next 3 years.

In addition to the cultivation of leaf tobacco the industry includes the production of cigarettes, cigars, cheroots, smoking and chewing tobacco. Colombo is the center of Ceylon's tobacco manufacturing industry. Its first mechanized cigarette factory went into operation in that city in 1927. Ten years later a second cigarette factory went into production. These two establishments have recently been modernized and are today successfully meeting domestic requirements.

Total factory output of cigarettes for the year ending March 1951 was 3.4 million pounds which was treble the annual average for the years just prior to World War II. According to trade estimates, factory production during 1949-50 was about 2.5 million pounds compared with approximately 2 million pounds in 1948-49. (These cigarettes weigh about 2.2 pounds per thousand.) The output of pipe-smoking tobacco was about 70,000 pounds in 1950-51 compared with 60,000 pounds in 1949-50 and only about 10,000 pounds in prewar years.

The outlook for Ceylon's tobacco manufacturing industry is promising. Only taxation can slow up the rate of expansion. The companies manufacture a wide range of well-made brands which include cigarettes made entirely of United States flue-cured tobacco, others made of 100 percent Indian and/or Ceylon flue-cured, and still others made entirely of domestic air-cured tobacco. Domestically manufactured cigarettes, packed in tins containing 50 pieces, range in price from Rupees 1.00 to Rupees 3.90 (about US$0.21 to US$0.81). Imported brands such as State Express 555 and Craven "A" retail at Rupees 5.50 (US$1.15) and Rupees 5.00 (US$1.04) respectively in tins of 50.

The domestic manufacture of cigarettes in Ceylon has improved to such an extent that imports of these products have declined sharply. They averaged slightly over 550,000 pounds during the late 1920's but dropped to only 12,355 pounds and 12,361 pounds respectively in 1949 and 1950. About 85 percent of

the imported cigarettes are flue-cured type imported chiefly from the United Kingdom; the bulk of the remainder are the popular United States brands. The quantities of other tobacco products imported were negligible, with the exception of hand-made bidis from India, imports of which have declined sharply during the postwar years. Imports of unmanufactured tobacco which increased from a prewar (1935-39) annual average of about 1,200,000 pounds to 1,545,278 pounds in 1948 declined to 934,349 pounds in 1949 but rose to 1,538,988 pounds in 1950. Practically all of this tobacco was flue-cured and came from the United States and India. About 62 percent of the imports for the 3-year period 1948-50 originated in the United States. Imports from India, however, increased from 199,250 pounds in 1949 to 747,284 pounds in 1950. This trend is expected to continue unless prices for United States flue-cured tobacco become more competitive.

Ceylon's exports of leaf tobacco are composed almost entirely of Jaffna leaf which is shipped to southern India for use in the manufacture of chewing tobacco and cheroots. Owing to quality and price factors this trade increased from 950,398 pounds in 1949 to 1,363,000 in 1950. Combined exports of leaf tobacco and products in 1949 totaled 996,269 pounds compared with 1,402,171 pounds for 1950. Exports of cigarettes, mainly for ships' stores, account for most of the export products. Ceylon's tobacco export business is expected to continue to increase moderately during the next few years.

INDONESIA

The Republic of the United States of Indonesia, known prior to World War II as the Netherlands East Indies, was for many years one of the leading tobacco producing and tobacco exporting countries in the world. Average annual production during the late 1930's was about 239 million pounds, which was in excess of the reported production in countries other than the United States, British India, China, and the U.S.S.R. During the 1935-39 period annual exports of leaf tobacco from the islands averaged approximately 101 million pounds, which made the Netherlands East Indies second to the United States as a tobacco exporting country. The bulk of the exports went to the Netherlands which sold important quantities, particularly of Java and Madura tobacco, in competition with United States cigar and other air-cured tobacco. Substantial lots of Sumatra's famous Deli cigar wrapper tobacco were purchased at the Netherlands auctions by United States cigar manufacturers.

During the late 1920's successful experiments were made in Java and Madura to produce Virginia flue-cured type tobacco. Commercial production was first attained in 1933 and rose steadily to average about 15.8 million pounds during the 1939-41 period.3/ Practically all of this tobacco was used in the manufacture of cigarettes in Java where total factory output averaged approximately 11 billion pieces annually during the years 1938 through 1940. Imports of leaf tobacco during this period averaged only about 2.8 million pounds but included 2.2 million pounds of United States flue-cured tobacco which were utilized in the manufacture of cigarettes.

During World War II all phases of the tobacco industry suffered severe damage. After the Japanese military occupation (1942-45) there was intermittent warfare for 4 years between Netherlands and Indonesian forces. This was followed by sporadic conflicts between native nationalists and tobacco plantation workers and later by dangerous insurgent guerrilla movements. These disturbances together with abnormal railway, highway, and shipping conditions gravely impeded postwar recovery, particularly in the leaf production branch of the country's tobacco industry.

Reliable statistics regarding tobacco in Indonesia have not been available since the war. From the best information available it appears that total production of leaf tobacco in the islands during recent years averaged less than 50 percent of the annual prewar outturn, and exports of leaf tobacco averaged only a little more than 20 percent of prewar. It is believed, that during recent years, imports of leaf tobacco have been about three times prewar imports as a result of the very small crops of flue-cured leaf and the steady increase in the consumption of flue-cured type cigarettes.

3/ Source: Statistical Bureau, Department of Agriculture, Djakarta.

U. S DEPARTMENT OF AGRICULTURE NEG. 1837 OFFICE OF FOREIGN AGRICULTURAL RELATIONS

Cigarettes are being produced throughout Indonesia at the expense of all other tobacco products. The output of the domestic standard machine-made varieties is expected to reach the prewar level in 1952 or 1953. Short-term prospects for imports of United States flue-cured tobacco are therefore bright. The long-range view is not favorable because price will be a vital factor. Several large trial shipments of Indian flue-cured strips from the 1949-50 crop were received by manufacturers in Java at c.i.f. prices equivalent to US$0.40 per pound. The tobacco was found to be satisfactory for blending in cigarettes and the low cost helpful in keeping down rising manufacturing costs.

Indonesia is an archipelago. It is situated between 6° North and 11° South latitude and extends over a distance of 3,100 miles along the equator. The total land area is about 743,000 square miles which is approximately one quarter the area of the United States. The total population (1950 government estimate) was 78 million compared with 61 million in 1930. Its land area is made up of over 2,000 islands of which Java, Sumatra, Madura, Bali, Lombok, and Celebes are the most important as regards tobacco production. Java and Madura combined have only 7 percent of the total area but two-thirds of the population. The population of these two islands in 1950 was about 52 million compared with 42 million in 1930. Sumatra with an area of 182,870 square miles, or about 25 percent of the total area, has a population of only about 12 million.

Most of the islands in the archipelago are very mountainous. The mountains generally rise abruptly from coastal plains, and several peaks are over 10,000 feet above sea level. Soils of the islands have been derived from volcanic ash, the weathering of rock formations, and the decomposition of dense tropical vegetation. The volcanic soils are rich in minerals, and those with a high percentage of humas are very fertile. Volcanic soils are most extensive in Java, and for this reason agriculture, including tobacco growing, is more developed in Java than in the other islands.

All of the land area in Indonesia is within 760 miles of the equator, and as a consequence temperatures throughout the year are relatively uniform. For each 300 feet of rise in elevation there is a decline in the average yearly temperature of about 1° F. Sunshine is plentiful. The difference between the longest and shortest days in the year is only about 48 minutes. Rains are frequent, but there is seldom a day in which the sun does not shine. Thus this region is especially endowed by nature for the production of tobacco.

The bulk of the tobacco produced in Indonesia is of dark or relatively dark cigar types. Under United States standards it would be classed either as cigar leaf or between the light and dark air-cured types. Sumatra's producers specialize in fine cigar wrapper tobacco which is known throughout the world; however, 80 percent of Indonesia's total tobacco production is on the islands of Java and Madura. Java produces sizable quantities of superior cigar tobacco termed Bladtabak, and most of Indonesia's flue-cured tobacco, but the producers concentrate on filler types known as Krossoks which are inferior to Bladtabak in general quality but in great demand in the Netherlands and other European countries. Practically all of Madura's tobacco is classed as Krossoks; small quantities of flue-cured tobacco are also grown. The major portion of Madura's

tobacco is lighter in color and milder than most of the tobacco grown in Java and Sumatra and is therefore very useful especially for blending purposes in the manufacture of cigarettes and pipe mixtures. Substantial quantities of tobacco are also produced in Celebes, Bali, Lombok, and other islands in the Indonesian archipelago; most of this is similar to the bulk of the tobacco grown in Madura.

Production

The production of tobacco in Indonesia is accomplished in four ways: (1) by natives working independently, (2) by natives working under the direction of European companies which supply them with seed or seedlings and contract with them for their crops, (3) by European planters who lease the land from the natives and hire them to work, and (4) by European companies leasing large tracts of land from native sultans and princes. The two important production classes are estate tobacco and native tobacco. During the years just prior to World War II, 75 percent of Sumatra's tobacco was grown on estates compared with about 33 percent in Java and Madura. Systems of land tenure under which estate tobacco production is carried out include leasehold for a maximum of 75 years, agricultural concessions practically equal to leasehold, and lands rented voluntarily from natives.

Estates in Sumatra are managed after the European system and involve the principle of agriculture concessions. Methods are scientific and highly intensive, and production is regulated by agreement. Estates in Java are also managed after the European method but not as in Sumatra. The management of estates in Java also varies with the locality. In Java, estate production in prewar years was concentrated in an area then known as Vorstenlanden, now called Kesultanan and composed of the districts of Surakarta and Djogjakarta located in central Java. About 1854-55, seed was taken from these districts to Sumatra where trial plantings were made which eventually resulted in the production of superior cigar wrapper tobacco in the Deli district of Sumatra.

Since the World War II production of estate tobacco in Kesultanan has been negligable but recently has recovered materially in the residency of Djember located in the southern part of the famous Besuki area in East Java where it is believed tobacco was first produced in Java on a commercial scale. Elsewhere the production of estate tobacco particularly in the Semarang and Modjokerto districts of Central Java and in Madura has increased steadily but is still only about half of the prewar outturn.

During recent years native production of tobacco has been resumed in the districts of Bondowoso, Lumadjang, Malang, and Kediri in East Java and in the districts of Rembang and Kedoe in Central Java as well as on many of the islands including Celebes, Madura, Bali, and Lombok.

The general outlook for recovery in production in the near future both by estate companies and natives is unfavorable because of the labor unrest and the uncertain political situation. High prices paid for flue-cured tobacco and greatly increased demand for the leaf will probably cause production of this type to expand rapidly even though expansion in tobacco production generally is limited.

Flue-Cured Type Tobacco

Experiments in the production of flue-cured type tobacco were first made in Indonesia on the islands of Java and Madura during the late 1920's. These were conducted by the leading cigarette manufacturing company which employed United States leaf tobacco experts. United States methods of cultivation and curing were introduced and Hickory Pryor, Gaynor, and Harrison Special Virginia seed were used. Encouraging results were obtained in the Bodjonegoro district of the Rembang residency, in Java, and around Pamekasan, the capital of Madura. During the next few years the company conducted successful trial plantings of this type at various other points in the islands. However, Bodjonegoro was found to offer the greatest possibilities; not only were soil and climatic conditions suitable, but production costs were lower than at other places and suitable railway transportation was available.

The cigarette company won the native's interest in this new leaf tobacco project by introducing the "Djantaran" system. Under this procedure it supplied the growers with seedlings, taught them to cultivate and harvest the leaf, and purchased it from them green at higher prices than were paid for other types of tobacco. During the 1928 season about 100 acres of Virginia flue-cured type tobacco were cultivated in the Bodjonegoro district. Expansion was slow until 1933 when 500,000 pounds (farm weight) were harvested from 1,000 acres. Higher prices for United States flue-cured tobacco, large increases in the Netherlands Indies import duty on leaf tobacco, and Government regulations requiring a substantial percentage of domestic leaf to be used in blends of domestic machine-made cigarettes led to an acceleration in the flue-cured production program and a steady increase in acreage. In 1934 approximately 2,000 acres of this type of tobacco were planted; by 1938 the area planted to this type had increased sharply to about 17,000 acres, from which approximately 4 million pounds (farm weight) were harvested.

In the late 1930's practically all of Java's Virginia flue-cured type tobacco was still grown in the Bodjonegoro and nearby Klaten districts by natives whose interest was maintained by steadily increased prices. Because of the company's experienced leadership and its constant cooperation with the growers, production went forward rapidly both quantitatively and qualitatively. The interests of the Government and the estate operators were aroused, and they joined in the further development of this project. Several experimental stations were established, and production was extended to other districts in Java and Madura. Greater care was taken with the cultivation of the tobacco. Topping and priming became standard practice, and a larger percentage of the crop was grown under irrigation. The area planted to flue-cured tobacco soared from about 24,710 acres in 1939 to 40,772 in 1940 and reached an all-time high of 46,949 acres in 1941. During this period of expansion in acreage, production increased from 9.9 million pounds (farm weight) in 1939 to 15.9 million pounds in 1940 and to the record figure of 21.6 million pounds in 1941. 4/ By this time about 1,100 brick flue-curing barns had been built and put into use. The United States flue-curing process was followed, and it improved the product both in general quality and appearance.

During World War II Indonesia's flue-cured tobacco production was practically destroyed. After the war, abnormal labor and political conditions retarded attempts at restoration until recent years when progress was made in certain areas of Java and Madura and in the Celebes. The best results were

4/ Source: Central Bureau of Statistics, Djakarta.

obtained at Bodjonegoro, Rembang, Kediri, and Solo in Central Java, Besuki in East Java, Sumenep and Pamekasan in Madura, and Maros in South Celebes. Total production of flue-cured tobacco in the 1951 season was reported at 3 million pounds (farm weight), compared with 2 million pounds in 1950, and over 1.1 million pounds in 1949.

Table 8. - Indonesia: Acreage and production of flue-cured tobacco in specified areas, 1949 through 1951

(farm weight)

Area	Acreage			Production		
	1949	1950	1951	1949	1950	1951
	Acres	Acres	Acres	1,000 pounds	1,000 pounds	1,000 pounds
Java/Madura	2,000	3,500	5,000	1,000	1,750	2,500
Celebes	350	500	900	175	250	500
Total	2,350	4,000	5,900	1,175	2,000	3,000

Source: Trade sources.

Java's flue-cured tobacco is grown principally from Harrison Special seed. Java's two top grades of flue-cured leaf from the 1950 crop looked very similar to United States type 12. They possessed fine lemon to good light orange color and were satisfactory in size and texture, but they were not comparable to United States flue-cured tobacco in flavor or aroma. However, the tobacco was neutral, burned fairly well, and was substituted for United States flue-cured tobacco for blending purposes in domestic cigarettes. The average price for green leaf from Java's 1950 flue-cured type crop was 0.60 rupees per kilo (US$0.072 per pound) compared with a prewar average of 0.16 rupees per kilo (US$0.019 per pound). Prices for the 1951 crop ranged from 0.25 to 0.75 rupees per kilo (US$0.03 to US$ 0.09 per pound) but averaged about the same as in 1950.

As the shift in consumer preference from strong, dark cigar-type tobacco to milder, brighter varieties is becoming more pronounced and the smoking of flue-cured type cigarettes particularly by the younger generation of both sexes is increasing, manufacturers and growers plan to increase production of flue-cured tobacco as much as possible. Consensus is that if the labor situation and growing conditions are favorable the outturn of flue-cured leaf could reach the prewar (1939-41) average of 15.8 million pounds (farm weight) within 5 years.

Native Kerftabak which enters commercial channels is sold principally by the producers to small dealers who resell it to larger dealers or manufacturers or sometimes to exporters. There are no established markets. Sales are usually made at the farm, buyer's warehouse, or village produce

Left. Natives in Java cultivating young Virginia flue-cured type tobacco plants in the seed beds. Note the grading sheds and flue-curing barns in the background.

Right. Cigar filler type plants growing in the field in East Java. Most of this tobacco is exported to the Netherlands.

Left. Cigar leaf curing sheds in East Java made of palm-leaf matting supported by bamboo poles. Sections of matting on the sides and ends may be opened or closed for ventilation purposes. These sheds are 90 to 120 ft. long and 60 ft. wide.

bazaars. Krossok is purchased by relatively large dealers, estate companies, and manufacturers who ferment, grade, and bale the leaf. The bulk of this leaf is exported. Most of the estate companies ship their entire production of tobacco to the Netherlands soon after it has been processed. In the Netherlands it is sold at the Amsterdam or Rotterdam auctions where it is purchased by manufacturers and dealers mainly for export. The flue-cured type tobacco is purchased from the growers chiefly in the green leaf by manufacturers who either cure and grade it themselves or arrange with some other manufacturer who owns flue-curing barns to perform that service for them.

In 1950 an attempt was made by the Government and a growers' group to form a cooperative society to grow and sell its production of flue-cured type tobacco in green leaf. This project is still alive but is not functioning as well as was expected on account of the disturbed labor and political conditions.

Sumatra's Cigar Wrapper Tobacco

The production of Sumatra cigar wrapper tobacco is confined to an area on the northeast coast within a radius of 30 miles of Medan, which is the capital and commercial center of the island. Belawan, 17 miles away, is its port. This famous northeast coast tobacco section is known as the Deli cigar wrapper district. The bulk of the leaf is light greenish-brown to brown in color and burns freely to a white clinging ash. The leaf is thin and elastic and ranks among the finest cigar wrappers in the world.

Deli wrapper tobacco is grown on large plantations, rather than on small or medium-size farms such as are common in the United States. Only one crop of tobacco is harvested each 8 years. The year following the tobacco harvest natives are permitted to cultivate a dry rice crop, and the land then lies fallow for about 7 years.

Estate production of the tobacco during the 5-year period 1935-39 averaged 30,715,000 pounds fermented weight, but decreased to 9,237,000 pounds in 1950, and about 5,000,000 pounds in 1951. The area planted to tobacco showed a corresponding decline, falling from a prewar annual average of 31,000 acres to 9,000 in 1950 and about 5,000 in 1951. The conversion of tobacco land for cultivation of rice and other food crops was principally responsible for the steady decline during the war. During the postwar period the labor situation and the illegal occupation of tobacco land by squatters were important contributory factors. The strike of field workers in January and February 1951 was the chief cause of the sharp drop in the harvest in 1951 compared with 1950. Negotiations between the Government and concession landholders regarding the conversions of concessions into long-term leaseholds are indicated, and action may be taken to evict squatters from concession tobacco lands. High-level estate officials, however, are apprehensive about the immediate future of the estates and pessimistic regarding the long-term outlook. Therefore, it appears that it will be many years at least before United States growers of cigar wrapper meet with the competition which existed in prewar years.

Left. Clearing jungle land to be used in the production of Deli cigar wrapper tobacco in Sumatra after the land has laid fallow for about 7 years.

Right. Priming Deli cigar wrapper leaf in a typical tobacco field on the northeast coast of Sumatra. To ensure even ripening of the entire crop, two leaves are plucked from each stalk every 2 days.

Left. Selecting cigar wrapper seedlings from the seed beds for transplanting in the Deli tobacco fields. Soils in this district appear to have greater influence in fixing commercial characteristics and quality of the leaf than do other factors such as varieties, climate, and cultural and curing practices.

Right. Deli cigar wrapper leaf hanging on bamboo poles in a curing shed. One shed will accommodate about 50,000 plants.

Left. A standard Deli cigar wrapper curing shed. The average shed is 180 ft. by 72 ft., and about 40 ft. at the ridgepole and 9 ft. at the eaves.

Right. Deli cigar wrapper leaf bundled and bulked and undergoing a scientific fermentation process. After regrading, the bundles are retied into hands containing 35 leaves.

The production of Sumatra cigar wrapper tobacco began in 1863. It was started by a single planter, J. Nienhuijs, who secured a concession for the use of land on which to grow tobacco from the Sultan of Deli. After successful trial plantings, probably from seed originating in Manila or Havana, Mr. Neinhuijs organized a plantation company in 1865 for large-scale production. Following this start, several other Netherlands companies, including the Deli Maatschappij, were organized, and by 1872 annual production of wrapper tobacco passed the 1-million-pound mark and by 1880 exceeded 10 million pounds. Between 1900 and 1918 production ranged between 40 and 52 million pounds annually.

During the early 1900's there was evidence of consolidation in the industry. World War I accelerated this tendency, and the number of separate Sumatra wrapper tobacco companies listed on the Amsterdam exchange decreased from 21 in 1913 to 9 in 1925. This consolidation of the industry progressed, and today Sumatra's cigar wrapper tobacco industry is almost entirely in the hands of companies popularly known as the "Big Four," headed by the Deli Maatschappij which was established in 1869. These companies are largely responsible for the widespread popularity of Sumatra's leaf tobacco as a wrapper for high-grade cigars and are striving diligently to regain lost trade and reduce costs of production which are about 15 times higher than prewar levels.

Prior to World War I, the industry was comprised of about 80 estates which held under concession approximately 650,000 acres, of which about 50 percent was good tobacco land. Just before World War II there were not more than 30 estates, and reports now indicate that the Government reduced estate acreage to 315,000 acres in 1951 and may reduce it to 125,000 by 1961. If plans materialize, the land thus acquired would be used principally for the production of food crops.

Soils in the Sumatra wrapper tobacco district apparently have greater influence in fixing the commercial characteristics and quality of the leaf than other factors, such as varieties, climate, cultural and curing practices.5/ These soils are primarily of volcanic origin, rich in minerals and underlaid with older marine rocks or sediment, of which there are outcroppings at certain points. The soils vary in color from red to brown and grey to black, and in texture from clay loams to sandy loams and black dust soil. Eight distinct soils have been recognized. Five are strictly volcanic soils; two are alluvial soils; and the remaining type, which is found only in limited areas in the tobacco district, is soil derived from marine rocks and sediment.

Sumatra, like all other tobacco-growing countries, has its plant diseases and insect pests. The most serious diseases affecting the growing tobacco plants are slime sickness (Granville wilt), frogeye (Cercospora nicotianae), mosaic virus, pseudo mosaic. Among the pests which do most damage in the field are caterpillars, grasshoppers, aphids, and capsid bugs. In the fermentation buildings and tobacco storage warehouses, damage from the tobacco beetle (lasioderma) is most feared.

5/ See J. P. Gibbs, Tobacco Production and Consumption in the Netherlands Indies (Foreign Series No. 81), Office of Foreign Agricultural Relations, United States Department of Agriculture, Washington 25, D. C., March 1940.

The time of planting the wrapper tobacco depends on the altitude. Seed beds in upland territory are prepared about December 25 and in the lowlands during the second week in January. Between 40 and 45 days after sowing, the plants are large and hardy enough to be transplanted in the open field. Harvesting takes place from 60 to 90 days after transplanting, depending on weather conditions. The plant reaches a height of from 5 to 8 feet and is not topped. It produces 24 to 28 usable leaves. To ensure an even ripening of the entire crop, two leaves are plucked from each stalk every 2 days, beginning at the bottom. The leaves are gathered in the early morning while it is cool and brought to thatched-roof curing sheds in matting baskets. The average curing shed is 180 by 72 feet, about 40 feet high at the ridge pole, and 9 feet at the eaves. One shed will accommodate about 50,000 plants.

Sumatra's cigar wrapper tobacco is air-cured and then put through a scientific fermenting process. The leaf is then regraded by experts and retied into hands containing about 35 leaves. These hands are checked for size and grade and pressed into bales. The standard weight of a bale is usually 80 kilos (176 pounds). Certain choice grades, however, are put up in bales weighing 70 kilos (154 pounds).

Sumatra Native Tobacco

In addition to the estate cigar wrapper tobacco grown by Europeans in the Deli district, air and sun-cured tobacco is produced in small plots by natives throughout Sumatra. When cured and cut, this native tobacco is known as Kerf. The bulk of this tobacco is of a strong, dark, cigar type, but substantial quantities of milder, lighter varieties are now being produced because demand is shifting from strong, dark tobacco to milder, brighter leaf, particularly for use in cigarettes. Native tobacco is used mainly for cigarettes, but important quantities are consumed in pipes. The cured tobacco is sold in the form of fine-cut, coarse-cut, and twist. Most of this native tobacco is produced on the west coast of Sumatra near Padang. Total production of Kerf in Sumatra just prior to World War II was estimated at about 10 million pounds, compared with approximately 15 million pounds in 1950. Sumatra's Kerf is cured and processed in the same manner as Kerf in Java. Java's Kerf tobacco competes in the local market with that produced in Sumatra. Currently, the price for the better quality domestic Kerf averages about 20 rupees per kilo (US$2.38 per pound), compared with 27.50 rupees (US$3.28 per pound) for the imported variety.

During World War II the Japanese arranged for some of the members of the Deli Maatschappij who were prisoners of war in Medan to produce a type of flue-cured tobacco, but attempts were unsuccessful because the soil and climate were unsuitable. However, this type has since been grown for sun and air curing, and production is being expanded, particularly on the west coast near the port of Padang. The price for the leaf which is usually brighter in color than Kerf, ranges from 20 to 24.50 rupees per kilo (US$2.38 to $2.92 per pound). The best quality of flue-cured type tobacco is imported from Java and sells as high as 35 rupees per kilo (US$4.17 per pound). Sumatra's dark coarse-cut and twist tobacco sells as low as 5 rupees per kilo (US$0.594 per pound).

Manufacture and Consumption

Indonesia's tobacco products industry includes the manufacture of cigarettes, pipe tobacco, cigars, chewing tobacco, and snuff. The bulk of the consumption is in cigarettes of which there are several types. The preferred cigarette is the standard machine-made flue-cured type.

Factory output of cigarettes is inadequate to meet the demand chiefly because of the shortage of leaf tobacco and the chaotic labor situation, but the industry is making commendable progress. Total factory production of standard machine-made cigarettes for 1951 was estimated at 9 billion pieces compared with about 8 billion in 1950 and 6 billion in 1949. The trade expect output will be around 10 billion in 1952 and that it will reach the prewar (1938-40) average of 11 billion by 1953. Cigarette production is increasing at the expense of all other tobacco products. Some cigarettes are made of blends containing either 100 percent United States flue-cured tobacco or a high percentage of United States flue-cured mixed with Canadian, Indian, or domestic flue-cured. Other cigarettes made by standard machines contain blends of various light air-cured indigenous tobacco mixed with domestic flue-cured or sun-cured leaf. Most of the machine-made cigarettes are well manufactured. They are 70 mm. in length, 24 to 24½ mm. in circumference, and weigh about 1 kilogram per thousand. They are put up in attractive, colored printed paper cup-packets containing 20 cigarettes and are sold under brand names such as Commodore, Escort, Kansas, Star, Whippet, and Wembley. For excise purposes the Government fixes banderole prices which range from 0.60 rupees to 2.0 rupees (US$0.16 to US$0.5362) per packet. The prices printed on the banderoles which are affixed to the packets are supposed to represent the price the consumer should pay, but owing to the short supply position cigarettes frequently are sold at more than twice the banderole price. Imported United States cigarettes such as Camels, Lucky Strikes, and Chesterfields are usually obtainable on the black market at about 6.50 rupees (US$1.71) per pack of 20 cigarettes compared with 20 rupees (US$5.26) for imported English-made brands such as Players Navy Cut Medium and Wills' Gold Flake cigarettes in vacuum tins of 50.

Another popular variety of cigarettes is known as Kreteks. Kreteks are much larger than the flue-cured-type cigarettes being 80 mm. in length and about 28 mm. in circumference and weigh 2 kilograms per thousand. Originally these cigarettes were all made by hand and wrapped in cornhusks instead of paper. Now two factories in Indonesia manufacture Kreteks entirely by machinery, and several hundreds of establishments employ thousands of rollers who make them in small hand-operated machines which produce a single cigarette at a time. The chief centers of production are in Java at Semarang, Kudus, and Surabaya. Kreteks are made of blends of native dark or brown air-cured tobacco mixed with about 25 to 30 percent cloves. Small bits of incense are sometimes included in the blend to improve the aroma. All Kreteks are now wrapped in standard white cigarette paper which bears the brand name. Considered as a smoke, Kreteks are much stronger and hotter than ordinary cigarettes and smell more like cloves than tobacco. They are put up in cellophane-wrapped paper packets, many of which are attractively labelled. The largest selling brands range in price from 0.30 rupees (U.S.$0.08) for packets of 10 to 0.50 rupees (US$0.13) for packets of 8.

Klobats, known as Strootjes before World War II, are the oldest type of cigarette in Indonesia, and they are still almost as popular as Kreteks. Klobats are made of blends similar to those used in Kreteks but contain a higher clove content. They are about the same length and weight as Kreteks but are conical in shape being 40 mm. in circumference at one end and about 15 mm. at the other. Klobats are made entirely by hand and are rolled into cigarette form by wrapping in cornhusks or Nepah palm. The center of the Klobat industry is in Java at Semarang but Surabaya, Malang, and Kudus are very important manufacturing points. Prices for Klobats range from 0.40 rupees (US$0.11) to 0.60 rupees (US$0.16) for packets of 10 pieces. Annual consumption during recent years is estimated to average about 4.8 billion Klobats and approximately 5.4 billion Kreteks. Prior to the war Klobats were more popular than Kreteks.

The quantity of roll-your-own cigarettes consumed is not known but it is probably greatly in excess of the number of both Kreteks and Klobats. This type of cigarette is usually made from Kerf or other fine-cut tobacco rolled in white or brown paper into the form of cigarettes. It is about the same length but not more than half the weight of the standard machine-made product.

The number of consumers of cigarettes in Indonesia is increasing, particularly among the younger generation of both sexes. The purchasing power of consumers is also rising, and those who can afford to do so are gradually switching from the roll-your-own, Kretek, and Klobat varieties to the standard machine-made cigarette of brighter and milder flue-cured type tobacco.

The short-term outlook for Java's cigarette manufacturing business is somewhat dimmed by adverse labor and political conditions, but expansion is going ahead. New cigarette factories are being constructed at Djakarta, a new plant is planned for Surabaya, and plant expansion and modernization are under way at Semarang.

The most popular type of tobacco produced and consumed in Indonesia is shredded in the curing process and is called Kerftabak or Kerf. Immediately after harvest the midrib is removed from the leaf. The resultant strips are then tied into individual bundles of about 50 or rolled into the shape of balls and bulked for 3 or 4 days until the desired color has been developed and some fermentation has been accomplished. The bundles of strips are then untied, and straight-laid on blocks or benches before being shredded by very sharp, large, hand-operated knives. The balls of tobacco are shredded or shaved by guillotine-shaped devices. The shredded product, now in the form of plain fine-cut tobacco, is spread in the sun on split bamboo matting until it is thoroughly dried. It is then ready to be marketed and consumed. The native's favorite Kerf is light-brown in color, medium in strength and neutral in aroma, but substantial quantities of strong dark Kerf are also consumed. Tobacco used in making Kerf is grown throughout Indonesia, but most if it is produced in Java, Madura, and Sumatra. Kerf is sold to the consumer loose in quantities varying in weight from a few grams to several kilograms at prices ranging from the rate of 4.00 to 15.00 rupees (US$1.05 to US$3.95) per kilogram.

The next most popular native tobacco products are shag and plain, fine-cut, and coarse-cut tobacco which are very similar in appearance to Kerf but are made from dark-brown, air-cured cigar types produced in Java, Sumatra, Madura, Celebes, Bali, and Lombok. After curing, the leaf is generally stemmed before being straight-laid on tables or platforms and cut with very sharp large guillotine-like knives. The same procedure is followed when the leaf is not stemmed, but the product is then known as shag or birdseye tobacco. The shredded or cut tobacco is bulked and in many instances is sprayed with sweetened water after being graded for color and prepared in units of various sizes and shapes for marketing. Native cut tobacco and shag are sold unpackaged. The price range is about the same for Kerf, shag, and native cut tobacco.

Indonesia's cigars and cheroots are all hand made. Production is carried on throughout the larger islands but principally in Java at the towns of Semarang, Magelang, and Djogjakarta, and in Sumatra at Medan. Consumption of these products is declining as a result of high costs and the shift in consumer preference from strong, dark tobacco to brighter, milder varieties. Most of the native cigars are below standard size but sell at the rate of 0.10 to 0.15 rupees (US$0.026 to US$0.039) each.

The manufacture and consumption of chewing tobacco and snuff has not been important for many years and this trade is rapidly disappearing.

Imports

Indonesia's imports of unmanufactured tobacco for the 5-year (1935-39) period averaged 2.8 million pounds. United States flue-cured leaf comprised the bulk of the total amounting to 2.2 million pounds annually. The remainder was principally United States flue-cured tobacco transhipped through the Straits Settlements, but small lots of Chinese flue-cured leaf were included in the total. Official figures covering imports of leaf since the war are not available, but it is estimated that about 7.6 million pounds and approximately 8.9 million pounds were received in 1949 and 1950 respectively. About 75 percent of this tobacco was United States flue-cured leaf received direct from the United States. It is believed that most of the remainder was made up of reexports of United States tobacco from European ports and shipments of flue-cured leaf from India.

Imports of tobacco products into Indonesia during the prewar period averaged 4.6 million pounds of which 4.2 million pounds was cut tobacco. Most of this was United States flue-cured, but there were also substantial quantities of United States dark fire-cured tobacco. Practically all of this tobacco was processed in the United Kingdom; some was prepared in the Netherlands. The flue-cured was fine-cut tobacco for use in the manufacture of cigarettes, and most of the fire-cured was used in making dark birdseye or shag chiefly for pipe smoking. Imports of cigarettes averaged about 346,000 pounds annually during the prewar period. The bulk of these cigarettes were manufactured in the United Kingdom from blends of United States flue-cured tobacco, but small lots were received from the Netherlands and the United States. The remaining 70,000 pounds of imported products were cigars, practically all

of which were from the Netherlands. Figures covering imports of tobacco products since the war are not available, but it is estimated that in 1949 they totaled about 4.5 million pounds and dropped to 3 million pounds in 1950. It is believed that cut tobacco and dark birdseye or shag shipped in bulk from the Netherlands make up the major portion of these imports; cigarettes are a very poor second and cigars insignificant.

Exports

Exports of unmanufactured tobacco from Indonesia during the 5 years (1935-39) averaged 101 million pounds fermented weight, annually. About 90 percent of the leaf exported went to the Netherlands where the bulk of it was sold for reexport. Most of the remainder was sent to Spain and France, but the Straits Settlements and Hong Kong each took quantities averaging slightly over 100,000 pounds per year. Exports from Java accounted for about 75 percent of the total and were comprised principally of Vorstenlanden and Besuki filler types. Exports of the finest leaf, Sumatra's Deli cigar wrapper, averaged about 25 million pounds annually during the prewar period. Reliable statistics covering exports since the war are not available, but official and trade sources have estimated exports for 1949 and 1950 at about 18 million and 27 million pounds respectively. As in prewar years, practically all of this leaf went to the Netherlands. Exports to the United States during 1949 and 1950 averaged less than 1 million pounds per year. Shipments to Singapore, the next largest outlet, were very small, and those to Belgium and Luxembourg, the next most important markets, were negligible.

Indonesia's exports of tobacco products in prewar years were composed almost exclusively of cut tobacco. Shipments of cut tobacco averaged about 700,000 pounds annually. Exports of cigarettes and cigars during the years just prior to World War II averaged only about 20,000 pounds and 16,000 pounds respectively. The Straits Settlements took practically all of the cut tobacco, over two-thirds of the cigarettes, and about half of the cigars. Exports of these products since the war are reported to be insignificant. The current unsettled labor, shipping, and political conditions together with rising domestic consumption and low leaf stocks make the short-term outlook for exports of leaf and tobacco products extremely unfavorable.

THE PHILIPPINES

Tobacco has always been of great importance to the economy of the Philippines. The pattern of the country's tobacco industry since the outbreak of World War II has changed tremendously, with exports on a greatly reduced level and imports increasing greatly. Exports of unmanufactured tobacco were only 8.1 million pounds in 1950 as compared with the prewar (1935-39) annual average of 37.3 million pounds. Exports of cigars were at an all-time low of 2.1 million pieces in 1950 as compared with the prewar annual average of 202 million pieces. Exports of cigarettes practically disappeared in 1950, totaling only 14,000 pieces, while exports of smoking tobacco completely disappeared. In the prewar period, exports of cigarettes averaged 37.3 million pieces and smoking tobacco 6.2 million pounds. This loss of overseas trade is attributed principally to the closing of European markets during the war, the shift in consumer preference from cigars and dark cigarettes to bright cigarettes, and the shortage of foreign exchange.

Important changes also occurred during the post-World War II period in the Philippines import trade, affecting both unmanufactured and manufactured tobacco. Imports of the former jumped from 96,000 pounds in 1948 to 793,000 pounds in 1949 and to the record level of 28.8 million pounds in 1950. Cigarettes, the country's Number One imported manufactured tobacco product, declined most significantly from 11.1 billion pieces in 1948 to 8.3 billion pieces in 1949 and 2.3 billion pieces in 1950. These changes were greatly influenced by Government controls, rumors of restrictions, and clandestine trade. As of June 1, 1951, stocks of imported cigarettes and leaf tobacco were very low.

The substantial increase in the country's manufacture of cigarettes is of special significance. Total output from licensed factories in the Manila area rose from an annual prewar (1935-39) average of 3.1 billion pieces to attain a record level of about 7.6 billion pieces in 1950. This was due primarily to import restrictions imposed by the Government to foster domestic manufacture. The emphasis now being placed by Government and trade on expanded production of leaf tobacco is also important. Total production of all types of leaf tobacco during the 1950-51 season is estimated at 62 million pounds compared with an annual average of 74.8 million pounds in the prewar period, but well-informed circles believe that by 1953-54 the crop will equal the prewar level and that the bulk of the increase will be in flue-cured tobacco, production of which for the 1950-51 crop is estimated at 1 million pounds. Prices, c.i.f. Manila, for domestic flue-cured leaf from the 1949-50 crop ranged from the equivalent of US$0.05 to US$0.40 per pound. Prices for best Isabela and Cagayan filler leaf from the 1949-50 crop averaged US$0.43 and US$0.36 per pound, respectively.

Leaf tobacco was first introduced in the Philippine Islands from Mexico during the last quarter of the sixteenth century. It was first grown successfully in the Cagayan Valley in northern Luzon. Originally the only tobacco

cultivated commercially was dark cigar-filler, which was utilized in the manufacture of cigars and cheroots. During the 100-year regime of the tobacco monopoly, which was abolished in 1882, sun-cured and air-cured wrapper, in addition to filler tobacco,were produced successfully. During United States Governmental administration good results were obtained in the cultivation of new cigar types, especially from seed originating in the United States and the Netherlands East Indies, and of cigarette varieties from the United States, Turkey, and Russia. During World War II, the Japanese grew small quantities of flue-cured tobacco from seed produced in Japan and Formosa. The best flue-cured tobacco ever produced commercially in the Philippines was grown during the 1949-50 season. Attempts to grow Burley tobacco have not as yet been very successful, but small quantities of this and Oriental cigarette varieties are grown, and the tempo of experiments and production is being accelerated.

Tobacco is grown on practically all of the 7,083 islands which comprise the country's total area of 114,000 square miles, an area a little less than the States of Georgia and Florida combined. Most of the country's 19.5 million people use tobacco, principally cigarettes, cigars, and cheroots. The majority of farmers grow tobacco on small plots ranging from one-tenth to three-fourths of an acre. Usually a farmer retains a portion of his tobacco crop for home consumption or barter for other farm produce. About 50 percent of the area in tobacco is cultivated by owners, about 25 percent by part owners, and the bulk of the remainder by share tenants. Many growers harvest filler, chewing, pipe, and cigarette tobacco from one farm.

The most important tobacco producing provinces have always been, and still are, Isabela, Cagayan, La Union, Pangasinan and Cebu, which collectively contain about 80 percent of the total area planted to tobacco and grow approximately 90 percent of the total crop. Filler tobacco predominates, and the finest varieties are grown in the Cagayan Valley in northern Luzon where the Cagayan River, with a length of 220 miles, overflows its banks each year to a maximum width of about 40 miles. This flooding causes natural replenishment of soil fertility. The type of filler produced in the Cagayan Valley is used in the manufacture of the better quality cigars. The sand leaves of the best fillers are primed for use as cigar wrappers. Cigar-binder tobacco as such is not produced, but good binders are selected from filler leaf and off-grade wrappers.

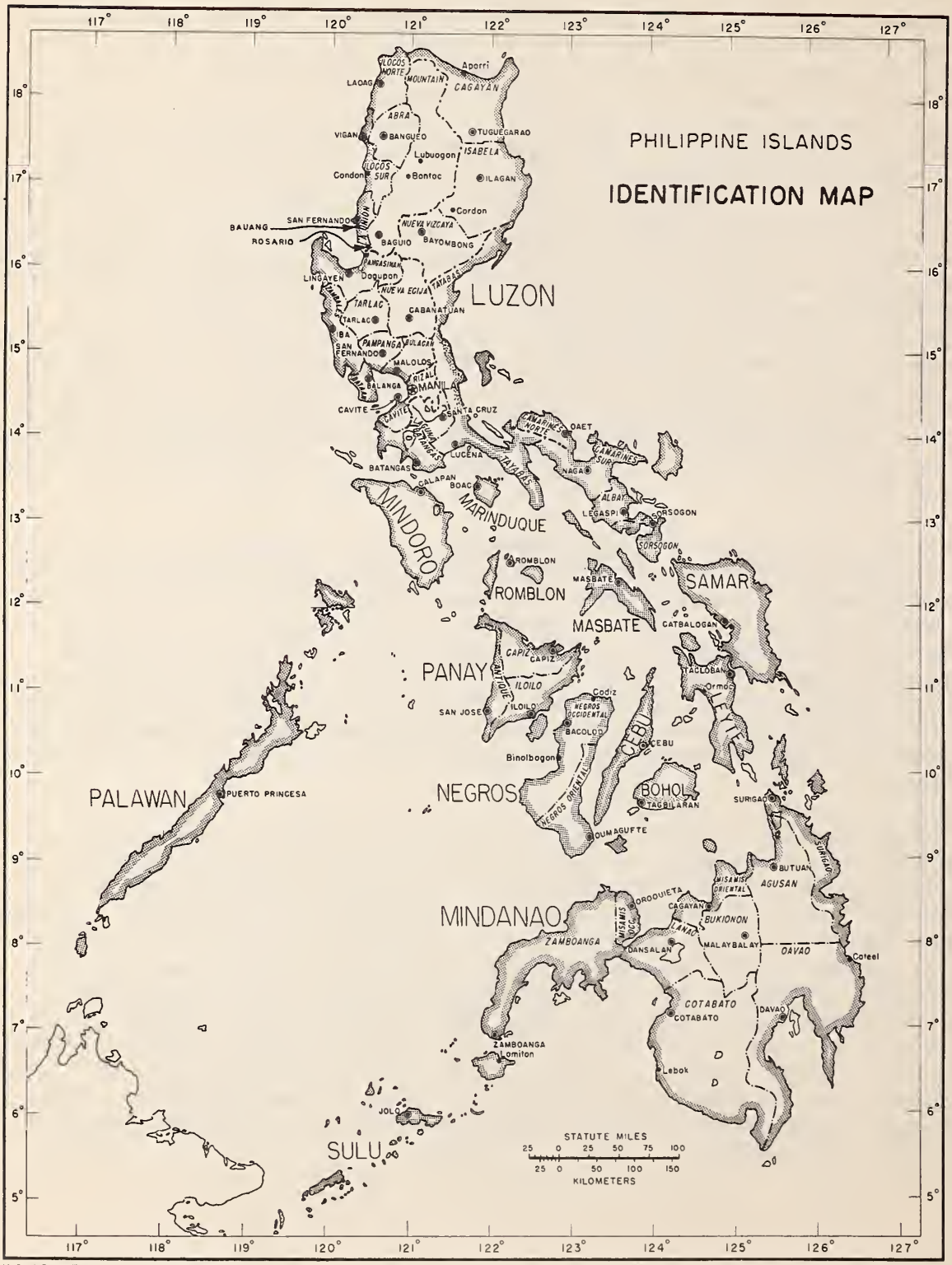
There are many varieties of filler grown in the Philippines but they are closely related to the following standard types: Simmaba, Vizcaya, Marogiu, Pampano, Repollo, and Espada.

Sun-grown and shade-grown wrappers have been produced for several decades. The better varieties of sun-grown wrappers are the Baker Sumatra, Ilagan Sumatra, and Florida Sumatra. Important production districts are in the Provinces of Isabela and Laguna. Successful shade-grown varieties are native Simmaba and Vizcaya grown in the Provinces of La Union, Ilocos Sur, and Batangas.

The most promising flue-cured cigarette tobacco yet produced in the Philippines was grown in the northwestern part of the country. The bulk of this was harvested in the Province of La Union in the San Juan and Agoo districts, but sizable quantities were harvested in the Province of Pangasinan around Bauang and Rosario, also on Mindoro Island and in Ilocos Sur. The soil is mainly dark-to-brown sandy loam. Since the early post-World War II period the most popular varieties of seed have been Oxford 26 and North Carolina Bright Yellow, but now plants from these classes suffer from cross pollination, and many have gone far towards reverting to native types. Chiefly because of this, but partially due to the shortage of flue-curing barns and lack of redrying facilities, the product is far from satisfactory. Recently the Government, and one of the new large manufacturers in Manila, tackled the problem of producing better, brighter, flue-cured leaf. The Government stepped up its program for research and experimental work, seed procurement and distribution. The company, in December 1950, formed a subsidiary which assist the growers to obtain seed or seedlings and buys and flue-cures the leaf. During the 1950-51 season it completed the construction of 40 flue-curing barns. These new barns are 20'x20'x24', being much larger than the 25 previously built and operated by the now defunct, formerly Government-controlled, National Tobacco Corporation.

During 1951 and for several seasons to come, the company plans to build a few hundred additional barns chiefly in the Luzon area. The new barns are to be constructed of concrete with corrugated iron roofing and outside furnaces which burn wood from the neighboring forests. Further, the company will soon assemble at Quezon City, near Manila, a two-stick and apron redrying and ordering machine, which will be the first modern tobacco redrying machine to be established in the Philippines. During 1951 the company augmented its staff by employing several United States leaf and manufacturing technicians. Two other factories in the Manila area each employ one United States manufacturing expert.

The Philippines total leaf tobacco harvest in 1950-51 is estimated by the Bureau of Plant Industry at Manila to be 62 million pounds from about 120,000 acres; 58.2 million pounds were produced from 115,000 acres in the 1949-50 season, and 48.3 million pounds from 95,727 acres in 1948-49. Postwar progress has been steady, and substantial restoration of the leaf tobacco industry appears likely because the labor outlook is brighter, acreage will be increased, and better seed and handling facilities will be available, especially for flue-cured leaf. During the 1949-50 season about 185,000 pounds of this type of tobacco were grown. The estimated production for the 1950-51 season is 1 million pounds. An output of at least 3 million pounds is planned for 1952-53, but fulfillment depends largely upon the availability of adequate supplies of proper seed, sufficient fertilizer, plus increased knowledge of cultivation and handling.



U. S. DEPARTMENT OF AGRICULTURE

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Flue-cured type tobacco seed beds in the Tobacco Experiment Station at Ilagan in the Isabela district in the northern Philippines. This excellent stand of plants is about ready for transplanting.

A view of variety tests of five flue-cured type tobaccos introduced at the Experiment Station at Ilagan. Flower heads of selected plants are covered with paper bags to prevent crossing.

A very promising variety of flue-cured type tobacco growing at the Central Experiment Station, Bureau of Plant Industry, Manila.

Left. Flue cured type tobacco curing barns at La Union in the northwestern part of the Philippines. These barns are made of brick and cement with corrugated iron roofs. They are 20'x20'x24' and have a capacity of about 1,500 pounds of green leaf.

One of the grading sections in the buying and curing depot at La Union.

Right. The Philippines' first modern flue-cured tobacco redrying plant which was being constructed at Quezon City near Manila in 1951.

Table 9. - Philippines: Imports of unmanufactured and manufactured tobacco by categories, 1935-39 average, and calendar years 1947-50

Commodity	Average 1935-39	1947	1948	1949	1950
			1,000 pounds		
Unmanufactured					
Leaf	1,075	101	96	793	28,792
Manufactured					
Cigars	315	225	-	1,050	165
Chewing	639	1,008	1,226	1,387	224
Smoking	98	171	516	473	94
Other	9	2	3	34	410
			Billion pieces		
Cigarettes	2.712	9.192	11.080	8.349	2.297

Source: Insular Collector of Customs, and Yearbook of Philippines Statistics.

The United States has always been the origin of practically all Philippine imports of leaf tobacco and tobacco products. United States blended-type cigarettes traditionally have comprised by far the major portion of such imports. Imports of cigarettes have declined sharply since 1948 when they reached a peak of 11 billion pieces, but it was not until 1950 that they dropped below the prewar (1935-39) level of 2.7 billion pieces (see table 9). This decline is due to restrictions placed by the Government in its endeavor to attain self-sufficiency as regards its tobacco requirements. During 1950, imported cigarettes comprised only 25 percent of the total number of cigarettes sold in the Philippines. The 1950 imports of other tobacco products including chewing and smoking tobacco also dropped below prewar. However, imports of leaf tobacco soared from a prewar annual average of 1.1 million pounds to 28.8 million pounds, mainly on the strength of rumors of import controls in favor of domestic grown leaf and restrictions on the importation of cigarettes.

Philippine exports of unmanufactured tobacco prior to World War II were principally to Spain, the Netherlands, Italy, Korea, and Japan; important shipments were also made to French Africa, the United States, China, Belgium, and the French East Indies. Shortage of foreign exchange and the shift in consumer preference from dark cigar type tobacco to brighter varieties contributed to the substantial decrease in exports of unmanufactured tobacco, as well as manufactured products, following the outbreak of the war (see tables 10 and 11). In 1950 total exports of unmanufactured tobacco were only 8 million pounds, far below the prewar (1935-39) annual average of 37.3 million pounds, and about 99 percent of the shipments went to only 4 countries, instead of to 20 as in the prewar period.

Table 10. - Philippines: Exports of leaf tobacco (including scrap) and tobacco products, 1935-39 average, and calendar years 1947-50

Commodity	Average 1935-39	1947	1948	1949	1950
			1,000 pounds		
Leaf	1/ 37,343	2/ 10,538	3/ 6,229	11,218	8,137
Smoking	6,182	-	-	-	-
			1,000 pieces		
Cigars	201,985	1,372	2,081	1,574	2,138
Cigarettes	37,348	6,000	1	610	14

1/ Includes 5,935,000 pounds of scrap; 118,000 pounds of others.
2/ Includes 283,000 pounds of scrap.
3/ Includes 48,000 pounds of scrap.

Source: Bureau of Census and Statistics.

Table 11. - Philippines: Exports of leaf tobacco (excluding scrap) by countries of destination, 1935-39 average, and calendar years 1947-50

Country of destination	Average 1935-39	1947	1948	1949	1950
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
United States and territories	615	745	105	363	519
China	461	592	321	64	-
Belgium	265	310	664	297	534
French East Indies	116	1,079	321	369	702
French Africa	895	524	-	-	-
Italy	2,571	-	5	-	-
Japan	1,916	-	-	-	-
Korea	2,401	-	-	-	-
Netherlands	4,360	-	5	-	-
Spain	14,450	6,934	4,710	10,079	6,282
Others	3,250	71	50	46	100
Total	31,300	10,255	6,181	11,218	8,137

Source: Bureau of Census and Statistics.

Manila, the capital and chief port, is the center of the tobacco manufacturing industry in the Philippines. In that area in June 1951, there were 51 Government-licensed tobacco factories all of which made cigarettes. Ten of these factories produced about 75 percent of the country's machine-made cigarettes. There is also a licensed factory at the seaport of Cebu. In addition, there are many clandestine factories scattered throughout the Islands. The total number of factories diminished substantially during the first half of 1951, and this trend is expected to continue as Government regulations are more rigidly enforced, and the law of the survival of the fittest takes its natural toll. Several of the larger factories are equipped with fairly adequate machinery and are efficiently operated. The cigar factories are not mechanized but quite a number of them are spacious and well managed and turn out excellent products. Cigarettes make up the most important segment of the industry (see table 12), but the output of cigars is important and production of smoking and chewing tobacco substantial. The quantity of snuff manufactured is insignificant.

Table 12. - Philippines: Production of manufactured tobacco products, 1934-38 average, and calendar years, 1947-1950

Commodity	Average 1934-38	1947	1948	1949	1950 1/
			Pounds		
Smoking	464,191	222,243	437,282	434,935	555,000
Chewing	472,167	230,455	320,584	304,087	447,000
			1,000 pieces		
Cigars 2/	315,545	58,034	87,146	91,764	93,000
Cigarettes	3,114,318	1,867,711	1,861,753	1,850,348	9,600,000

1/ Estimated.
2/ Including cheroots.

Source: Collector, Internal Revenue.

The licensed factories stepped up output of cigarettes from a prewar annual average of 3.1 billion pieces to above 9.6 billion pieces in 1950, and plans were to exceed this record level in 1951. There are a great variety of cigarettes, about 50 percent of which are made of dark filler-type tobacco. The bulk of the remainder are blends of United States and domestic tobacco and a few are the straight Virginia-type. Included in the lot are numerous brands of good general quality but none comparable to popular United States cigarette brands. The majority of the cigarettes are machine-made and are encased in standard white paper, some of which is sweetened; others are in brown paper. Some of the cigarettes have a tucked-in end; others have a crimped lap. Strengths are mild, medium, and strong.

In 1932, a famous Philippine company in Manila, which made its reputation on its cigars and dark cigar-type cigarettes, manufactured the country's first United States blended-type cigarette. The brand name for these cigarettes was Pal, and they were sold in packets containing 20 pieces at the equivalent of US$0.05. This pointed the trend, and started quite an American pattern. Today, there are in Manila dozens of brands of domestically-made, so-called United States-type blended cigarettes. Some sell under names such as Uncle Sam, New Yorker, and Hollywood. Mentholated cigarettes bear appropriate brand names such as Alaska, Eskimo, and Sno-Man. The three most popular cigarette brands in the country today are made by old-established cigar manufacturers in Manila. Mainly because of the shortage of cigarettes from the United States, these now sell at the equivalent of US$0.25 per packet of 20 pieces. Popular imported United States brands including Chesterfield, Camel, and Lucky Strike, which, before import restrictions, sold in packets of 20 at the equivalent of about US$0.20, now sell at prices ranging from the equivalent of US$0.50 to US$0.60.

The preferred cigarette in the Philippines is the United States blended-type, but the original dark-cigar variety is still popular and there is a significant demand for the straight flue-cured product. The country has been a splendid market for United States cigarettes and leaf tobacco, but owing to the Philippine Government's import restrictions it appears that the Government is well on the way toward losing badly needed revenue and the United States much of its tobacco export trade with the Islands.

Hong Kong

The British Crown Colony of Hong Kong is one of the greatest transshipping ports in the world; it is a splendid tobacco center, but grows no tobacco. Its storage warehouses and sales facilities for tobacco leaf and tobacco products are better than average. It has three large, efficiently operated tobacco factories, which are well equipped with modern machinery. The total output of cigarettes during 1950 was about 2.5 billion pieces, which was approximately the same as the quantity manufactured in 1949 and double the prewar (1935-39) annual average. Imports and exports of unmanufactured leaf and tobacco products increased steadily during 1948, 1949, and 1950, but the current tight restrictions on shipments to China cause the trade to take a pessimistic view of short-term prospects. It appears that Hong Kong is being bypassed, to a certain extent, in favor of Whampoa, the Pearl River port for Canton, and the nearby port of Macao, apparently because embargo laws and other trade restrictions are not being enforced at these points as strictly as they are in Hong Kong. The industry is in a healthy condition, however, and the long-term outlook is favorable.

Hong Kong is located at the mouth of the Canton River, 90 miles southeast of Canton. It is only 391 square miles in area, but the population is currently estimated at about 2.2 million. During the late 1940's, it was approximately 1.75 million, compared with about 850,000 in the late 1930's. The bulk of the people are in Victoria, the capital, and in the peninsular city of Kowloon on the mainland. Its natural harbor is 17 miles in extent and is the only safe deep-sea anchorage between Shanghai and Indochina.

Combined imports of unmanufactured tobacco and manufactured tobacco products show a steady postwar increase, and the 1950 figures are about 12 percent above 1938 (see table 13). Imports of unmanufactured tobacco rose slightly during 1948-50; imports of cigarettes and other tobacco products fluctuated within a narrow margin, but in 1950 imports of manufactured tobacco products were more than treble those in 1938.

Imports of unmanufactured leaf tobacco increased from 8.1 million pounds in 1949 to 8.7 million pounds in 1950 but are still short of the prewar (1938) level of 11.8 million pounds. The bulk of this leaf is flue-cured, and it is used principally in the manufacture of cigarettes. Prior to World War II, China was the chief source of supply, but during the past few years most of these imports came from the United States. Now India is becoming an increasingly important contender for the market, and imports from the United States are declining slightly. A reversal of the downward trend

in imports of United States leaf should result from a narrowing of the price gap between United States flue-cured leaf and Indian flue-cured leaf, which is currently selling c.i.f. Hong Kong at the equivalent of US$0.40 per pound. Imports of stems, scrap, and shorts increased from 33,000 pounds in 1938 to 540,000 in 1949 and 783,000 pounds in 1950. Practically all of this material originates in the United States although recently small lots were received from India.

Hong Kong's imports of cigarettes increased from 1.1 million pounds in 1938 to 5.2 million pounds in 1949 and 5.6 million pounds in 1950. Prior to World War II the bulk of these imports came from the United Kingdom and China. Those from the United Kingdom were principally the straight Virginia type, while most of the cigarettes received from China were made from a blend of United States flue-cured tobacco mixed with Chinese flue-cured leaf. During postwar years, imports of cigarettes from the United States took the lead, and in 1950 totaled 3.8 million pounds compared with 1.6 million from the United Kingdom. Although the United States blended-type cigarettes are steadily gaining in popularity, the preferred cigarette is still the straight flue-cured.

The manufacture of several world-famous English brands has recently been transferred to Hong Kong. These cigarettes are very well made. Some of the brands contain blends of 100 percent United States flue-cured tobacco; others are manufactured with varying proportions of United States leaf blended with Indian and Chinese tobacco. The consumer price for the highest grade locally made Virginia brand is HK$3.50 (US$0.6125) per tin of 50 cigarettes; those in the next bracket sell at HK$2.75 (US$0.4812); and other well-known Virginia brands also made in Hong Kong sell at HK$2.50 (US$0.4375) and HK$2.25 (US$0.3938).6/ The cheapest locally made brand sells at HK$0.25 (US$0.438) per pack of 10 cigarettes. Imported popular United States blended type cigarettes sell at HK$1.00 (US$0.175) per pack of 20 pieces. The consumption of cigarettes has risen with the increase in the smoking population and in the purchasing power of consumers.

6/ Indonesia and Belgium are trying to enter this market on a price-cut quality basis. The Hong Kong dollar equals US$0.175.

Table 13. Hong Kong: Imports of unmanufactured leaf, stems, and scrap, and manufactured tobacco, 1938 and 1948-50

Item	1938	1948	1949	1950
	Pounds	Pounds	Pounds	Pounds
Unmanufactured tobacco:				
Leaf, stemmed and unstemmed	11,773,000	6,621,977	8,089,394	8,708,907
Stems, scrap, etc.	33,000	638,058	539,480	782,506
Total	11,806,000	7,260,035	8,628,874	9,491,413
Manufactured tobacco products:				
Cigarettes	1,128,759	5,373,801	5,246,764	5,630,827
Cut tobacco, pipe, etc.	669,736	73,807	124,799	107,128
Cigars and cheroots	16,749	22,601	22,020	27,533
Total	1,815,244	5,470,209	5,393,583	5,765,488
Combined total imports	13,621,244	12,730,244	14,022,457	15,256,901

Source: Compiled from official sources.

Table 14. - Hong Kong: Imports of leaf tobacco and cigarettes, by country of origin, 1938 and 1948-50

Country of origin	1938	1948	1949	1950
	Pounds	Pounds	Pounds	Pounds
Leaf tobacco:				
China	7,154,903	37,203	977,810	952,745
United States	2,921,321	5,968,399	5,320,511	4,580,068
India	536,584	575,881	1,595,232	2,711,524
Macao	158,441	26,494	30,925	425,817
All others	1,001,751	4,000	164,916	38,753
Total	11,773,000	6,621,977	8,089,394	8,708,907
Cigarettes:				
China	472,289	-	109	207,341
United Kingdom	546,611	3,108,784	2,401,730	1,587,202
United States	80,792	2,207,875	2,777,397	3,801,804
Macao	22,367	3,488	3,385	24,108
All others	6,520	53,654	64,143	10,372
Total	1,128,579	5,373,801	5,246,764	5,630,827

Source: Compiled from official sources.

In prewar years, most of Hong Kong's imports of cut tobacco and pipe mixture came from China, with the United Kingdom and the United States a poor second and third. Imports in this category fell from 670,000 pounds in 1938 to 125,000 pounds in 1949, and 107,000 pounds in 1950. During recent years, the sources for this tobacco have been the United States, the United Kingdom, and Macao, in the order named.

In addition to leaf, stems, scrap tobacco, and cigarette and cut tobacco, Hong Kong imports small quantities of cigars and cheroots. These increased from about 17,000 pounds in 1938 to 22,000 pounds in 1949 and 28,000 pounds in 1950. The Philippines has always been the major source of supply, with the Netherlands second and the United States third.

Hong Kong's combined exports of unmanufactured leaf tobacco and manufactured tobacco products in 1950 were up about one-third over 1949, and more than double 1948, but still slightly below prewar figures (see table 15). Exports of leaf, stems, and scrap rose sharply during 1949 and 1950; exports of cigarettes and other tobacco products remained steady, but were well below prewar levels.

Table 15. - Hong Kong: Exports of unmanufactured and manufactured tobacco, 1938 and 1948-50

Item	1938	1948	1949	1950
	Pounds	Pounds	Pounds	Pounds
Unmanufactured tobacco:				
Leaf, stemmed and unstemmed	3,039,703	1,352,804	3,355,508	4,739,616
Stems, scrap, etc.	421,465	23,609	100,617	1,312,118
Total	3,461,168	1,376,413	3,456,125	6,051,734
Manufactured tobacco products:				
Cigarettes	6,637,865	3,064,727	4,117,028	3,958,057
Cut tobacco, pipe, etc.	700,236	17,476	24,982	27,903
Cigars and cheroots	36,024	374	562	3,788
Total	7,374,125	3,082,577	4,142,572	3,989,748
Total exports	10,835,293	4,456,990	7,598,697	10,041,482

Source: Compiled from official sources.

Table 16. - Hong Kong: Exports of leaf tobacco and cigarettes by country of destination, 1938 and 1948-50

Country of destination	1938	1948	1949	1950
	Pounds	Pounds	Pounds	Pounds
Leaf tobacco:				
China	1,409,873	95,508	1,419,421	1,378,062
Macao	1,377,780	840,071	855,215	1,891,878
Egypt	588	338,171	803,714	552,904
Germany	75,582	-	-	627,231
French Indochina	12,000	56,374	-	21,900
Netherlands	31,400	-	123,210	93,676
Belgium	39,999	-	127,032	-
All others	92,481	22,680	26,916	173,965
Total	3,039,703	1,350,804	3,355,508	4,739,616
Cigarettes:				
Macao	684,761	1,938,319	3,163,209	1,057,703
British Malaya	149,706	460,344	335,105	1,374,732
Philippines	10	141,500	32,500	119,054
French Indochina	277,857	83,121	16,605	3,739
China	5,243,138	5,554	26,241	728,253
North Borneo	28,037	63,438	204,524	552,301
All others	254,356	372,451	338,844	122,275
Total	6,637,865	3,064,727	4,117,028	3,958,057

Source: Compiled from official sources.

Hong Kong's exports of unmanufactured leaf tobacco have always been mainly to China and Macao. However, prior to World War II, important shipments were made to Germany, Belgium, the Netherlands, and French Indochina. During the last few years, exports to these countries and Egypt were substantial, but the bulk of the shipments again went to China and Macao. These two countries also take most of Hong Kong's stems, scrap, and shorts. Exports of these have been irregular -- 422,000 pounds were shipped in 1928, 101,000 pounds in 1949, and 1.3 million pounds in 1950.

Hong Kong's exports of manufactured tobacco products consist principally of cigarettes. During the prewar years, China was by far the most important outlet, with Macao second, and French Indochina and British Malaya next. In 1949 and 1950, Macao, British Malaya, and North Borneo were the largest outlets for cigarettes, and efforts were made to build up trade with the Philippines and Indonesia. Exports of cigarettes, which in 1938 totaled 6.6 million pounds, fell to 4.1 million pounds in 1949; and 4 million pounds in 1950.

In addition to unmanufactured tobacco and cigarettes, Hong-Kong exports small quantities of cut tobacco, cigars, and cheroots. Shipments of the cut tobacco (including pipe mixtures) dropped from 700,000 pounds in 1938 to only 24,000 pounds in 1949, and were 28,000 pounds in 1950. British Malaya and Macao are the most important export markets for cut tobacco. Hong Kong's export trade in cigars and cheroots has almost disappeared. In 1938, it totaled 36,000 pounds, and China was the largest market, followed by French Indochina, Thailand, and British Malaya. In 1948 and 1949, it totaled only 374 and 562 pounds, respectively, but increased to 3,788 pounds in 1950 when the West Indies took 3,084 pounds.